FEEDSTUFFS

★ A WEEKLY NEWSPAPER ★

FOR THE FEED MANUFACTURER, JOBBER, BROKER and DEALER

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Agencies Criticized For Increasing Loans To Poultry Industry

By JOHN CIPPERLY
Feedstuffs Washington Correspondent

WASHINGTON—As the feed and poultry industries try to hold down the lid on production, government agencies are pouring out loan funds to industry expansion operations, according to Senator John J. Williams (R., Del.).

In a statement before the Senate this week, Sen. Williams called attention to the accelerated pace of lending to the poultry industry by the Small Business Administration in the past 60 days, a period in which the U.S. Department of Agriculture disbursed $7 million to prop the market under poultry and eggs.

Sen. Williams said that SBA, in that same period, had advanced $1,124,000, which in his judgment indicates an acceleration of its previous activities in this industry. In the past six months USDA has spent more than $19 million in an effort to aid the poultry and egg industries in price-supporting activities.

This is not the first criticism of SBA and the Farmers Home Administration in this field by Sen. Williams. His comments on the prodigality with government funds by these two agencies goes back more than two years. He charged that this "unnecessary lending activity" is in no small part responsible for the de-

(Turn to POULTRY LOANS, page 4)

Lilly Issues Statement On FDA Letter; Asserts Safety of Stilbestrol

INDIANAPOLIS—Eli Lilly & Co. this week issued a statement commenting on a sentence regarding stilbestrol which was part of a Food and Drug Administration letter on the status of arsenicals and dienestrol diacetate under the Delaney amendment to the food additives law. (Feedstuffs, July 18.)

The Lilly statement also pointed out information showing the safety of stilbestrol as used in cattle feeding.

The text of the statement follows:

"The July 18 issue of Feedstuffs carried the text of a letter from the Food and Drug Administration to feed manufacturers which attempted to clarify the status of arsenicals and dienestrol diacetate under the De-

(Turn to LILLY, page 4)

APHF Discussion Highlights Continuing Changes, Problems For Poultry, Allied Trades

By EMMET J. HOFFMAN
Feedstuffs Staff

ST. LOUIS—Representatives of the poultry and allied industries, facing continuing price squeezes and rapid industry changes, turned out in large numbers here this week to hear comments and suggestions on ways to meet the current and future problems.

Some 4,180 persons turned out for the 43rd American Poultry Congress & Exposition at the Kiel Auditorium in St. Louis. And educational sessions were well attended. Financially pressed poultry people were eager to obtain information presented by the speakers and panel members.

The event, held July 21-23, was sponsored by the American Poultry & Hatchery Federation. Next year's Congress and Exposition will be held in Memphis.

The speakers and panel members presented several discussions of interest to both feed and poultry industry people. Among these were scheduling of broiler production and marketing, the market in the future for chicks and poults, future marketing patterns in eggs and economic and sociological adjustments in agriculture.

In addition to the educational program, there was an exposition featuring products and promotions of 188 manufacturers. This was the largest poultry industry exposition since the World's Poultry Congress in Cleveland in 1939.

Officers Elected

Ray Parmenter, Parmenter Reds, Inc., Franklin, Mass., was elected president of the APHF for the coming year. Other officers elected are L. M. Manford, Miller Manford Hatchery, Cuero, Tex., first vice president; Ray Firestone, Troutville (Va.) Poultry Farm, second vice president; Fred Donsing, Donsing Breeding Farm and Hatchery, Rio Linda, Cal., secretary-treasurer; C. J. McAleavy, Wisconsin Valley Hatchery, Wausau, Wis., executive director; and Vern Steckley, Steckley Mill & Hatchery, Kendallville, Ind., executive director.

(Turn to AFHF, page 85)

USDA Report Predicts Continued Expansion of Integrated Egg Plans

WASHINGTON—Integrated methods of producing and marketing eggs are resulting in reduced unit costs for many firms in the egg industry, and the advantages of well coordinated programs over traditional egg production and marketing operations are likely to result in continued development of these programs.

These are among the conclusions of an extensive new U.S. Department of Agriculture report on "Integrating Egg Production and Marketing." The report is on a pilot study by USDA's Agricultural Marketing Service of the method by which two or more successive steps in egg production and marketing are coordinated by single firms or cooperatives. The study analyzes the circumstances responsible for growth by integrated operations in the egg industry and appraises their future importance in egg marketing.

The report said that contract marketing and quality control programs accounted for some 10% of the nation's eggs in 1958. Contract production programs, it was indicated, probably accounted for less than 5% of the egg production in 1958. However, both types of programs have been expanding and are expected to grow further.

Large owner-integrated operations,

(Turn to INTEGRATION, page 89)

Situation on Feed Use of Arsenicals, Estrogens Reviewed by AFMA

CHICAGO—The American Feed Manufacturers Assn. this week reviewed the current situation in regard to feed use of stilbestrol, dienestrol diacetate and arsenicals under the Delaney amendment to the food additives law.

In a bulletin to members, the AFMA said:

"1. After further consideration of the available scientific data, FDA has now retracted its earlier statements that indicated all arsenic containing compounds and dienestrol diacetate are carcinogenic. Food and Drug officials now admit that their scientific advisors cannot say that these compounds are unsafe when used in feeds. If these substances can be given the 'green light' after further study and checking by qualified experts, the food additives amendment of 1958 would not apply. This would allow all feed manufacturers to again use these products subject to the usual regulations that have been in effect.

"2. FDA has not publicly announced any change in its position on diethylstilbestrol. It is believed, however, that some progress is being made. If 'hysteria' can be avoided and is replaced with calm, sound reasoning, it would appear there is hope that this product might also receive further consideration that would deem it safe under the conditions of its intended use.

"3. It is generally agreed, after careful consideration, that immediate litigation or legislation involving the Delaney Clause would be a hazardous undertaking. Either of the above approaches at the moment could be 'ex-

(Turn to ARSENICALS, page 89)

FEEDSTUFFS *Features This Week*

SOYBEANS FOR BROILERS: Processing of unextracted soybeans for broiler feeding is discussed in an article on **page 8.**

POULTRY: How an Arkansas dealer's semi-integrated poultry program is succeeding for him is told in an article on **page 14. SERVICE:** The role of a poultry serviceman in a feed sales program is described on **page 26.**

BUSINESS FAILURES: A report on a study of feed and farm supply business failures in 1958 appears on **page 20.**

EGG CONTRACTING: Contract egg farming in Georgia is the subject of a thorough discussion on **page 38.**

INGREDIENTS: A price situation and outlook and report on millfeed appears on **page 52.**

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Kent to Build at Waterloo, Iowa

MUSCATINE, IOWA—Kent Feeds has announced plans to build a new feed plant at Waterloo, Iowa. Construction will begin early this fall. Announcement of the mill was made at company headquarters here by G. A. Kent, president, and S. G. Stein, chairman of the board.

O. W. Joiner, general manager of the company, said that the new plant will produce approximately 350 tons of feed daily and will employ some 55 persons.

The plant will serve an area in central and northeastern Iowa and several new territories in Minnesota.

The Waterloo mill will be the second new Kent plant. A new plant at Sioux City, Iowa, was completed early in 1958. These mills are in addition to the plant at company headquarters in Muscatine.

Officials said the new mill will be of the most modern design and will feature the latest advances in feed plant construction and machinery.

The plant will be built on an eight-acre tract of land on Highway 57 near the Wagner Mfg. Co.

Waterloo was selected as the site for the mill after a study of several cities in northeastern Iowa.

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Top of the Hopper

WHILE THE FEED INDUSTRY is most pleasant to contemplate as an industry of steady growth and great future promise, it is well at times to be reminded that all does not go well for every firm in the business. Some reflection on the fact that there are failures in the business from time to time can contribute to a more thoughtful attitude in business conduct.

An analysis of business casualties during 1958 (page 20) provided by Dun & Bradstreet, Inc., does not reveal a particularly gloomy picture, but it does point up the fact that even in a "boom year" losses can be large and failure can dash the hopes of fellow feed men.

Failures of feed and farm supply retailers totaled 42 last year, compared with 48 the year before. Losses of creditors, however, were up 48% and climbed to a new high. Failures appear to be trending down in 1959. Feed manufacturers fared better, according to this compilation, with only three failures recorded. There were eleven in 1957. Also, resultant liabilities were down sharply.

Whether it is significant or not we don't know, but in the first five months of this year failures in feed manufacturing are up to last year's mark in numbers and creditors' losses are up sharply.

Why did these businesses fail? In 9 out of 10 cases Dun & Bradstreet attributes failure to lack of management experience and ability. The more detailed listing of "apparent causes" is worth examining closely.

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LINEAR PROGRAMMING and the use of electronic computers are considered the latest thing in least-cost feed formulation. However, a production man was pointing out the other day that ingredient cost isn't the only thing to consider. Manufacturing costs and appearance of the feed are examples of other considerations. Even though ingredient costs might be lower on a particular feed, if production costs more than offset the ingredient reduction, the net result is a disadvantage. For example, one plant had its pelleting capacity cut way down when it tried to pellet a new least-cost formula. The point made by this production man is that total costs, including manufacturing costs, plus sales problems must enter into formulation decisions along with ingredient costs.

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THE MIDWEST FEED MANUFACTURERS ASSN. next week swings into the "grass roots" phase of its continuing program for improving understanding between feed men and veterinarians. State and regional conferences have illuminated the problems that frequently develop, but to accomplish the goals set forth at these gatherings the real spadework must be done at the local level.

Feed manufacturers are cooperating through their salesmen, who will bring dealers and local veterinarians to meetings in five Missouri communities. They will be held in Cape Girardeau July 30, in Springfield July 31, Sedalia Aug. 1, Kirksville Aug. 3 and St. Joseph Aug. 4. The need for better relationships between these two groups serving agriculture is widely recognized, and the pattern set in Missouri could well be adopted in other states.

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Evidence of probable extension of the trend toward building of more local feed mills by multiple-unit concerns is seen in the keen interest some companies are showing in information on costs of shipping ingredients to various locations. With transportation costs an increasingly important factor in over-all feed procurement and

(Turn to **TOP OF THE HOPPER**, page 89)

How's Business?

AN EVERY WEEK REVIEW OF FORMULA FEED BUSINESS VOLUME, INCLUDING PRICE, SUPPLY AND DEMAND TRENDS

Formula feed business around the country this week remained steady compared with recent weeks. Nothing of significance in either an upward or a downward trend has aroused the industry. While the majority of regions reported volume at a steady pace, the Southwest enjoyed gains, primarily because of stepped up shipments of turkey feed. Business turned slower for the South Central region—and this was a surprise. The wholesale feedstuff price index was mostly unchanged at 81.2 this week, compared with 81.3 last week and 92.7 a year ago. The feed-grain index advanced .6 points to 70.6 this week as against 72.5 a year earlier. The hog-corn ratio dropped to the lowest level of the season at 11.1. For the comparable week last year the ratio was 16.5, and last week it was 12.3. (Ingredient prices in detail on pages 86-88.)

Northwest

If poultry consumption of feeds was as good as last year, Northwest feed manufacturers wouldn't be disappointed at all about July business. Even so, they're still happy, for production of hog, turkey, broiler and dairy feed has held up well.

Most manufacturers reported that business was good this week. One representative said his company's only disappointment was in feeds for layers. Another manufacturer's representative said if poultry feed volume was as good as last year, his firm would be recording a banner year. "Any decline we're seeing is in layer feeds," he said.

This week's production was running along at a satisfactory rate. Mills could handle more business, of course, but July demand has remained strong for a longer period than in past years. Production, for the most part, has been hand-to-mouth. It was reported that order backlogs had dwindled and the expected July "slump" may arrive next week.

One mill reported that it expects to wind up July 15% ahead of the same month last year, but most others are finding it hard to keep up with last year's summertime records without good poultry feed production.

Feed price adjustments may be at hand, up for some feeds and down for others. Soybean oil meal and animal protein prices were sliding. Alfalfa meal, millfeeds and screening prices were moving upward, however.

Northeast

Business continued on about the same level as last week. Egg mashes continued to be the leading seller with growing mashes, turkey, dairy and broiler mashes following in that order. The hot dry weather helped dairy feed sales for a little while, but rain made good pastures again and dairy feed sales leveled off.

The grain market was unsettled as this was the last day of trading under July options.

Running time of the mills averaged 5-7 days for at least a 36-hour week.

Southwest

Feed manufacturing volume gained moderately in the Southwest this week, primarily because of stepped up shipments of turkey feed and continued good hog feed volume. Broiler feed shipments were fairly good, considering the cutback from recent high levels of chick placement, but otherwise poultry feed markets were dull. Some mills indicated a little pick up in cattle feed movement.

There has been a slow but steady improvement in egg prices over much of the Southwest area and values went up about 1¢ doz. in the past week. However, the market is still too low to encourage heavy feeding of layers generally.

Mills ran at a satisfactory rate, nearly all firms getting a full week's operations according to their customary standards. Some plants were reported on a three-shift, six-day operation this week.

Prices averaged unchanged, but there was some variation. In general, the high protein feeds were steady to 50¢ lower in some cases, while the predominantly carbohydrate types were about 50¢ to $1 higher.

Central States

Manufacturers of commercial mixed feed advise that the demand for their product as a whole is going along on a fairly even keel with a generally satisfactory situation maintaining. However, there are some exceptions. Call for hog feeds is holding up well so far, although top prices for hogs at Chicago are down around $15 per cwt. There does not seem to be anything in the very immediate picture that might bring about a change in this segment of the mixed feed trade.

But from the standpoint of poultry feeds, the May and June hatching figures were anything but encouraging and, in addition, the July 1 statistics on eggs in incubators on that date were indicative of a still further curtailment in broiler production in July. With prices for the latter currently not far from the point which broiler people refer to as the "bankruptcy level" that was experienced earlier this year, some of the mixers are of the opinion that better days may be ahead for broiler plants as production gets into closer gear with demand. Call for turkey feeds seems to be holding up well.

More optimism, or possibly it would be more realistic to say "less pessimism," seems to be current with regard to the chances of a broader demand from big-time laying flock operators. Egg prices did stage a fair recovery from the extreme low levels of late spring, and while some of that recovery has since been lost, better than 50% of the outside runup has been retained. All of which is encouraging from the standpoint of a resumption of a more normal demand for commercial feeds from that source.

South Central

Business turned slower for the majority of feed manufacturers this week and in several instances plant operations are being reduced below five days. The downturn, following a fairly long period of stable demand, comes as a surprise. Mixers doubt that there has been enough reduction in livestock numbers to account for it even though drouth conditions in the trade area have accelerated the movement of livestock to market.

Although total deliveries are down,

(Turn to **MARKETS**, page 91)

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Resolution Suggests Egg Buying Change

ST. LOUIS, MO.—The board of directors of the American Poultry & Hatchery Federation this week passed a resolution recommending to the Secretary of Agriculture that if and when it becomes necessary to purchase eggs for the school lunch program to remove surpluses, the funds be allocated proportionately to the schools for purchasing good quality large or medium eggs at the local level.

A similar resolution, drawn up by the Minnesota Egg Producers Assn., and the newly formed Minnesota Egg Council, was presented at the first annual meeting of the new National Egg Council and at the APHF convention, both coinciding with the American Poultry Congress & Exposition in St. Louis. Introduction of the resolution was by L. L. Baumgartner, Litchfield, Minn., executive secretary of the two Minnesota egg groups which asked that funds used to purchase dried whole eggs for school lunches be allocated to the schools for buying fresh, grade A shell eggs.

Mr. Baumgartner said fresh eggs would be more palatable to young school students, and egg consumption would be increased. It was the Minnesota Egg Council's opinion that egg dishes served at school lunches have turned children away from eggs.

Purchasing of fresh eggs for school lunches, Mr. Baumgartner said, would provide a better food and would save on costs of processing, packaging, refrigeration, storage and transportation.

Grant Voted for Study Of Estrogen in Forages

SAN FRANCISCO—Due to an increased interest in the estrogenic content of dehydrated forages, the board of directors of the American Dehydrators Assn. has voted a grant of $2,000 to the U.S. Department of Agriculture's western utilization research and development division to speed up research work now in progress at that laboratory.

The board, meeting recently at the Clift Hotel in San Francisco, also formally approved 25 new applications for direct membership which had been received since the last meeting, and also accepted eight applications for associate membership.

Named Vice President

MINNEAPOLIS — George H. McCabe has been elected vice president of the Kellogg Commission Co. and will be in charge of sales, according to an announcement from E. S. Ferguson, president. Mr. McCabe also has been elected to the firm's board of directors.

Before joining Kellogg, Mr. McCabe was with the McCabe Co., which was sold last year to the Farmers Union Grain Terminal Assn., St. Paul.

Report Assembled On Rates in N. E.

NEW YORK—A report consolidating information which will serve as the basis of a presentation to be made in the near future before the research committee of the Association of Eastern Railroads was assembled here July 22-23 by a committee composed of northeastern feed men seeking reduction in freight rates on corn and soybean meal shipped into the area.

J. C. Bressette, Wirthmore Feeds, Inc., Waltham, Mass., is chairman of the committee, which is seeking reductions in ingredient freight so that the poultry industry of the Northeast "can be more competitive with southern and southeastern poultry areas."

General Mills Sets New Sales Record in 1958-59 Fiscal Year

MINNEAPOLIS — General Mills' sales and earnings for the year ended May 31 were the best in the company's history, Gerald S. Kennedy, chairman of the board, and Charles H. Bell, president, reported this week to stockholders and employees.

Sales for the 1958-59 fiscal year totaled $545,998,000, more than $16,000,000 better than last year, the previous record fiscal period. Earnings of $16,817,000 for the fiscal year also represented a new high. The earnings figure is $2,123,000 above the previous record year of 1957-58.

Feed Division

General Mills' annual report noted that during the latest fiscal year the company's feed division introduced Larro SureVeal and Larro SureTasty farm feeds. The oilseeds division introduced ReleasaGen, a compound used in plastic molding, and EpoxyGen, an epoxidized soybean oil used in industry.

In February of this year, a new mill for production of Larro Sure Feeds began operation at Tampa, Fla. It has a capacity of 100 tons in a 16-hour day.

The feed division featured farm-product recipes from Betty Crocker in nation-wide promotions. It also sponsored a farm kitchen recipe roundup, offering prizes for the best recipes centering on chicken, turkey, pork, beef, lamb, eggs and dairy products.

Oilseeds division plants at Rossford, Ohio, and at Belmond, Iowa, increased their output and improved their efficiencies, the annual report said.

General Mills officers said earnings for the 1958-59 fiscal year amounted to $6.77 per share of common stock, as compared with $5.94 the previous year.

A new high of $22,628,000 in taxes was paid during the fiscal year.

At the end of the fiscal year, the company had 13,560 employees and 14,560 stockholders. Payments to employees for wages, salaries and retirement benefits totaled $81,604,000, more than $3,463,000 above the previous record year of 1957-58.

The board of directors has recommended that a three-for-one common stock split be voted on by stockholders at the Aug. 18 annual meeting.

The annual report told of continued expansion of the company's service to its flour customers through promotions, special advertising and cooperating with baking associations.

An unprecedented number of new food products were introduced during the year by the grocery products division. New products also were introduced by other divisions, including refrigerated foods, special commodities, chemical and mechanical divisions.

The grocery products division expanded Canadian operations and acquired the plant, formulas and U.S. rights to the brands and trademarks of Spratt's Patent (America), Ltd., Newark, N.J., adding a new series of pet foods to the company's product family.

Also covered in the report were activities of various foreign subsidiaries.

Court Restrains Use Of Trade Name

OKLAHOMA CITY, OKLA. — The Chickasha (Okla.) Cotton Oil Co. has been restrained by federal court order from using the trade name "Save Way" for its livestock and poultry feed products.

The judge ruled the name used by the company infringed on the brand name advertised by Safeway Store, Inc., which has been in use for 32 years, and that the "Save Way" trade name constituted an infringement on that reputation.

National Egg Council Holds First Meeting

ST. LOUIS, MO. — The National Egg Council held its first annual meeting here July 23 in conjunction with the American Poultry & Hatchery Federation annual congress and exposition.

The National Egg Council will represent the egg producers of the nation. Memberships were reported in 39 states. The membership drive began in late May. Three states—Indiana, Minnesota and California—have state affiliate organizations in operation and applications for state affiliation have been requested by an additional six states.

Ray Parmenter, Parmenter Reds, Inc., Franklin, Mass., was elected president of the newly formed organization.

Other officers elected were: Carroll Eiler, Warsaw, Ind., first vice president; Mrs. Doretta Taylor, Home Port Farm, Kansas City, second vice president; and Fred Donsing, Rio Linda, Cal., secretary-treasurer.

The board of directors was expanded from five to eight at the meeting. Board members are Ray Parmenter; Carroll Eiler; Vern Steckley, Kendallville, Ind.; Mrs. Taylor; L. L. Baumgartner, Baumgartner Poultry Farm, Litchfield, Minn.; William McKay, Vista, Cal.; O. H. Green, Seven Oaks Farm, Spartanburg, S.C.; and Fred Donsing.

Beef Cattle Course To Stress Pelleting

ATHENS, GA.—Reports on recent developments in pelleting forages and concentrates, and viewpoints on how to improve the quality of beef cattle will be included in the program of the beef cattle short course at the University of Georgia July 31.

There will be four talks by livestockmen, a panel on pelleting feeds for beef cattle and a tour of the new livestock poultry building and the beef cattle herd at the university.

Dr. R. A. Long, head of the animal husbandry department at the university cited reports that several commercial pelleting installations already have been established in Georgia, and that many people are considering this type of operation.

Goldberg Firm Makes Organization Change

WEST FARGO, N. D.—An organizational change has been announced by the Goldberg Feed & Grain Co., West Fargo.

The feed division, formerly known as the Goldberg Feed & Grain Co., will now be under the name of Gold Label Feeds, Inc., according to Richard W. Goldberg, sales and promotion manager. The Goldberg Feed & Grain Co. will continue, but will only handle the merchandising of grain as it has in the past.

The firm has added 400,000 bu. storage capacity in the form of all-steel flat storage. This unit will operate under the firm name of Goldberg Grain, Inc.

The operations of the combined businesses will not be altered. Jacob H. Goldberg is the president of all three corporations.

POULTRY LOANS

(Continued from page 1)

pressed conditions which have occurred in the poultry segment of agriculture.

Bringing this condition to the attention of the Senate, Sen. Williams commented wryly, "The time is long overdue when these agencies should begin conducting their business with some degree of common sense," indicating that, at heart, the senator is an optimist.

Chicago Feed Club Plans Outing July 31

CHICAGO — A Milwaukee outing, featuring golf and baseball, is planned for July 31 by the Chicago Feed Club. Golf, with tee-off time at 10:00 a.m., and dinner to follow, will take place at Milwaukee's North Hills Country Club. The baseball game will be between the Milwaukee Braves and the St. Louis Cardinals.

Dinner, set for 6:00 p.m., will cost $5, and baseball tickets $1.95 each. Industry members and guests planning to attend are requested to send reservations and checks to: Bob White, Bob White & Co., 605 Lee St., Des Plaines, Ill. He requests that checks be made payable to the Chicago Feed Club.

Arrangements have been made to hold rooms for those attending at the Polly Valley Motel, 12700 W. Blue Mound Rd., Milwaukee, and the Forty Winks Motel, 11017 W. Blue Mound Rd., Milwaukee. Reservations should be made directly with the motels by those planning to stay overnight.

LILLY

(Continued from page 1)

laney amendment. Eli Lilly & Co. is of the opinion that this letter was highly prejudicial to diethylstilbestrol.

"The statement, 'Diethylstilbestrol, however, has been found to produce cancer when fed," is extremely misleading in the absence of necessary qualifications. Lilly would like to make the following facts known in regard to stilbestrol's alleged cancer causing properties:

"1. FDA's assertion that stilbestrol comes under the Delaney amendment is based on laboratory experiments in which special mice, inbred to produce spontaneous mammary cancers in 100% of the females, were used. There is absolutely no evidence that feeding stilbestrol to cattle causes cancer in either the cattle or consumers of the meat from such cattle.

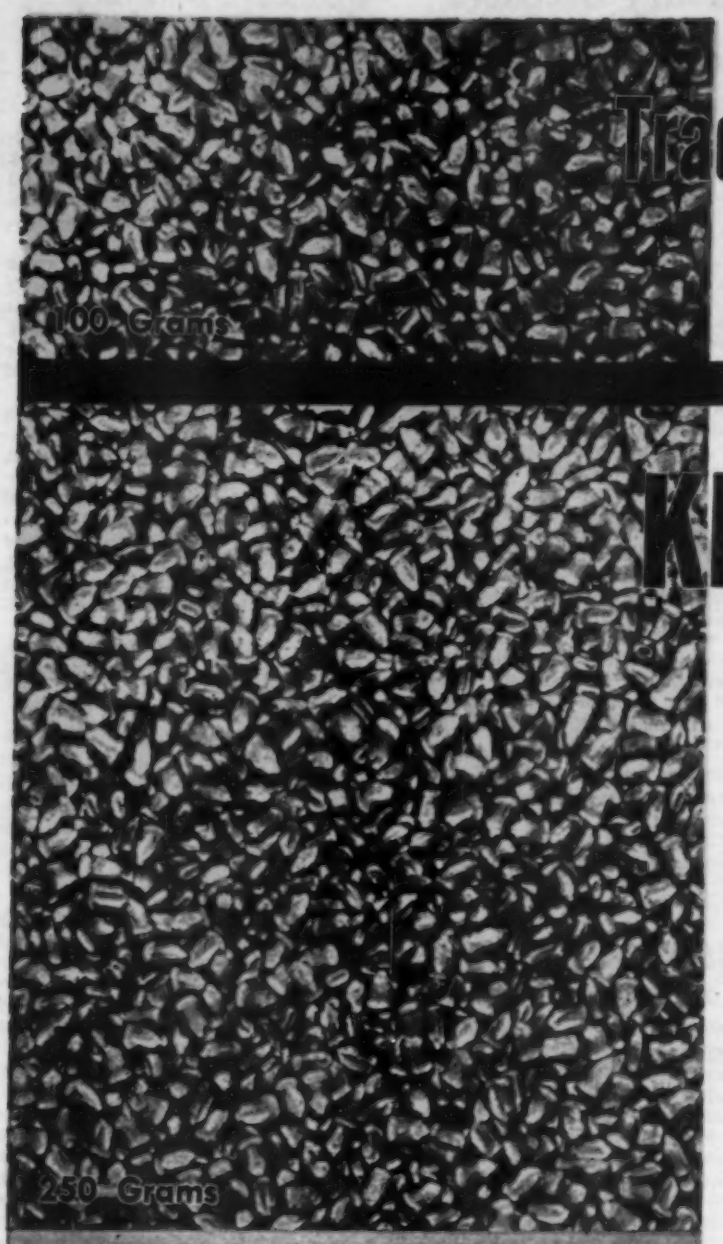
"2. In two volumes titled 'Surveys of Compounds Which Have Been Tested for Carcinogenic Activity,' published by the U.S. Department of Health, Education and Welfare, the following statistics are shown:

> In tests using some 200 cancer prone hybrid mice described above, tumors were produced in over half the mice fed stilbestrol. However, in additional tests involving a total of 429 rats, 149 fowls, 13 pigs, 9 dogs, 7 goats and 1 cow, the feeding of stilbestrol in varying amounts produced no tumors whatsoever.

"3. Medical experts of Eli Lilly & Co. as well as others have pointed out that it is extremely unscientific to project the effects of hormones in one animal species to another species. Dr. Delbert Bergenstal of the National Cancer Institute said at a symposium in Washington, D. C., in 1956: '. . . Certain strains of mice given a minute amount of estrogen will develop breast cancer. This is indeed true, but there are many other strains of mice, rats, guinea pigs, monkeys and rabbits in which no carcinoma of the breast develops during the administration of estrogens.'

"4. No estrogenic residues can be detected in the meat or fat of cattle fed the recommended level of stilbestrol when biological tests sensitive enough to detect .5 part per billion of sample are used. Several common foods that are eaten daily contain much higher estrogenic residues than this in their natural state.

"Eli Lilly & Co. feels compelled to repeat its earlier statement that under the uses for which the FDA has sanctioned stilbestrol, it is both a safe and valuable chemical."



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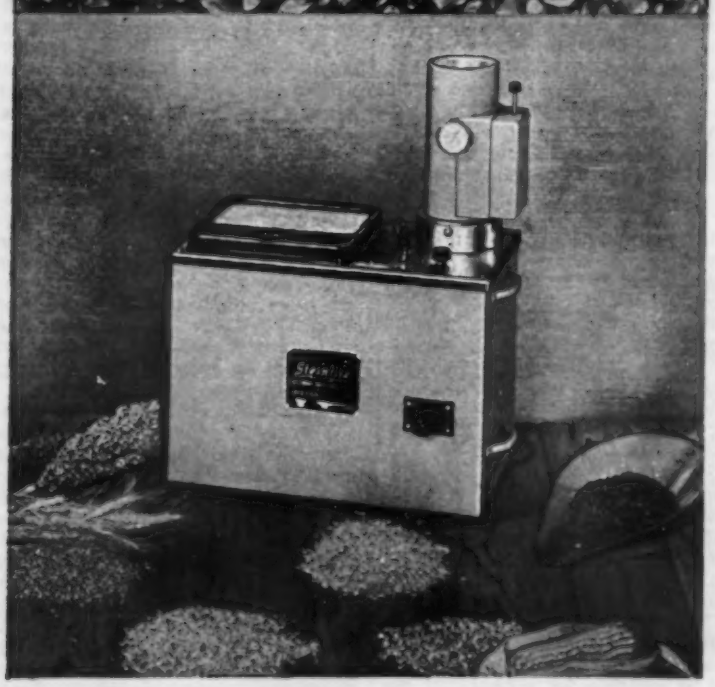

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Many of the speakers for the 1959 Feed Production School, to be held Sept. 23-25 in Kansas City, were on hand for a meeting and screening session recently at Manhattan Beach (Minn.) Lodge. Several of them are shown here. Seated, left to right, are Robert Stroup, Sprout, Waldron & Co., Inc., Muncy, Pa.; R. L. Patterson, Proctor & Gamble Co., Cincinnati; Charles Zusi, Containers Laboratories, Chicago, and Oak Smith, Wenger Mixer Mfg. Co., Kansas City. Standing, Ed Williams, Butler Mfg. Co., Kansas City; Will Brooks, Illinois Farm Supply Co., Springfield; Phil Wake, J. H. Wake Feed Mill, Oskaloosa, Iowa, and Max Cooley, Hoffman-Taff, Inc., Springfield, Mo.

New Information on Pelleting Will Be Presented at School

MANHATTAN BEACH, MINN.—Feed men who attend the 1959 Feed Production School in Kansas City will be presented with some entirely new information on various aspects of the increasingly important subject of pelleting.

This was pointed out by members of the production school committee following a committee meeting and "screening" session for speakers last week at Manhattan Beach Lodge. Much of the new information, they noted, will result from original research projects—conducted by industry suppliers and others—which will be reported at the school.

The main production school is set for Sept. 23-25 at the Continental Hotel in Kansas City, with pelleting as the principal subject. In addition, there will be a Small Mill Short Course, designed for operators of mills turning out some 50 tons or more per day, on Saturday, Sept. 26, at the Continental. Pelleting will be one of the chief topics of discussion at the short course, too.

The production school committee, which is headed by Art Saalfield of The Quaker Oats Co., Sherman, Texas, met here to finalize program plans for both the three-day production school and the one-day short course. In addition, the committee heard preliminary reports on many of the talks and research projects to be presented at the school, and the committee members worked with the speakers on the information to be presented.

The cost-of-pelleting research project to be presented at the 1959 Feed Production School is being discussed by, left to right, Al Bohl, Wolf Engineering Co., Chicago, who is conducting the study; Art Saalfield, the Quaker Oats Co., Sherman, Texas, school committee chairman, and John Wessman, director of activities for the school.

The aim of this session, explained Mr. Saalfield, was to assure that feed men attending the school will get practical and specific answers to their questions and will be able to hear reports on some entirely new developments which have resulted from reeent research. In both the talks and the research reports, he said, much of the program will be directed toward ways of (1) producing and handling pellets of all types more efficiently and at lower costs and (2) producing better quality, tougher pellets.

Research

The pelleting research reports will be one of the principal features of the 1959 school. Described at the screening session were several of the projects. For example:

Dairy feeds: Robert L. Stroup, Sprout, Waldron & Co., Inc., Muncy, Pa., outlined a project in which information is being gathered on pel-

(Turn to PELLETING, page 90)

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Machinery Firms To Have Consulting Booths at School

KANSAS CITY—A new feature of the Feed Production School this year will be consulting booths where students will have an opportunity to discuss problems and new developments with representatives of machinery and other suppliers.

The Feed Production School will be held Sept. 23-25 at the Continental Hotel in Kansas City, and the Small Mill Short Course will be presented on Saturday, Sept. 26. The consultation areas, on the fourth floor of the hotel, will be open from 3 p.m. to 10 p.m. each school day, except Saturday, when the area will be open all day until 6 p.m.

Officials of Feed Production School, Inc., report that nearly 30 firms have so far reserved consulting booth space. These are Black, Sivalls & Bryson, Inc., Dodgen Industries, Nebraska Boiler, Kice Metal Products, Richardson Scale Co., California Pellet Mill Co., Productive Acres Mfg. Co., Hayes & Stolz, Landers Mill Mfg. Co., Columbian Steel Tank Co., Butler Mfg. Co., Combs & Co., Archer-Daniels-Midland Co., Bemis Bro. Bag Co., Universal Hoist Co., Prater Pulverizer Co., Daffin Mfg. Co., FMC Bulk Transport Systems, Union Bag-Camp Corp., Wenger Mixer Mfg. Co., B. F. Gump Co. and Longhorn Engineering Co.

Poultry Breeders Meet at Congress

ST. LOUIS, MO.—A membership organization meeting of the Poultry Breeders of America took place here during the American Poultry Congress & Exposition.

The new organization accepted the responsibility of sponsoring the National Committee on Random Sample Testing of Poultry as one of its functions.

Active membership of Poultry Breeders of America is made up of poultry breeding organizations doing foundation pedigree breeding work. Individuals employed by institutions in the Americas and engaged in poultry breeding work are eligible for associate membership.

Headquarters of the organization will be in the American Poultry & Hatchery Federation Building, 521 E. 63rd St., Kansas City 10, Mo.

Application for "active" charter memberships will be accepted through Sept. 30. Dr. Wm. Lamoreux, Kimber Farms, Niles, Cal., is president. Dr. George Godfrey, Honeggers' & Co., Forrest, Ill., is first vice president and Dr. Cecil McClary, Heisdorf & Nelson, Inc., Kirkland, Wash., is second vice president. Don M. Turnbull, executive secretary, APHF, Kansas City, will serve as secretary-treasurer.

Chairman of the National Random Sample Committee on Poultry Testing is Dr. Clyde Mueller, Arbor Acres Farms, Glastonbury, Conn.

USDA Relaxes Wheat Support Requirements

WASHINGTON — Because prolonged drouth, particularly in northern wheat states, is resulting in a higher percentage of light test wheat than usual, the U.S. Department of Agriculture has announced it is relaxing 1959-crop wheat price support requirements to include lightweight wheat that otherwise would not be eligible for price support.

The lighter weight wheat included under the relaxed provisions will be "Sample" grade on test weight only, but no wheat testing less than 40 lb. per bu. will be eligible for support.

The lightweight wheat will be discounted below the minimum test weight (50 or 51 lb. bu., depending on class) for Grade No. 5 wheat at the rate of 4¢ for each pound through 45 lb. per bu. and 6¢ for each pound thereafter for wheat having a test weight of 40 through 44 lb. per bu. This discount will be in addition to other required discounts and will be added to the discount of 9¢ per bu. for wheat grading No. 5 on test weight.

Before the provisions were relaxed, price support was limited to wheat grading No. 3 or better, or No. 4 or No. 5 on test weight only. The eligibility requirements are being broadened to make price support more generally available to farmers, to prevent a demoralized market price for this quality of wheat and to encourage more orderly marketing, according to USDA.

The low test weight wheat being included in the program is storable and is suitable for commercial use either as food or feed, USDA officials add.

Price of Pollyphos To Go Up on Nov. 1

HOUSTON, TEXAS—Butler Chemical Co. has announced that it will increase the price of its defluorinated phosphate, effective Nov. 1.

Floyd Gee, sales manager, said the price of the company's product, Pollyphos would go up 15¢ per unit of phosphorus to $74.35 ton on a basis of 19% phosphorus. The Nov. 1 price increase is necessary, he said, because of "continued price increases of raw materials, fuel and labor."

Delaware Studying Processing of Whole Soybeans as Feed

NEWARK, DEL.—The use of processed, locally grown soybeans as a replacement for extracted soybean oil meal and feed fat in broiler diets currently is under extensive investigation at the University of Delaware.

Some of the findings in the work will be discussed at the university's annual Farm Field Day Aug. 5 at the Georgetown Experiment Station.

The aim of the soybean work, the university said, is to cut costs of shipped-in soybean meal and fat.

"The university, in cooperation with industry, is looking for a method of processing soybeans locally, without great investment in equipment, so that full feeding value will be available," officials said. "Raw soybeans do not measure up in broiler diets unless they are heat-treated. The problem is to find methods of processing that will be both economical and effective."

Prof. Tom D. Runnels of the animal and poultry industry department is in charge of nutrition tests with the whole soybean product, and Howard C. Hoyt of the agricultural engineering staff is the process engineer on the project. One feeding experiment has been completed at Georgetown. Comparisons were made with unextracted soybeans processed in a meat scrap cooker and in a commercial, continuous-flow type cooker.

"The commercial cooker normally handles extracted soybean oil meal at high moisture under a slight vacuum, but the unextracted ground soybeans would not flow properly and had to be dried to about 5% moisture in order for them to move through the cooker without clogging the machinery," the university said.

"Feed tests with this material in the broiler ration resulted in poor growth and feed utilization. Research has shown that protein may be damaged when heated at a low moisture level. These results indicate that experiments in low moisture cooking can be eliminated as a possibility for practical soybean processing.

"The batch process consisted of cooking the ground soybeans in a meat scrap cooker with a steam jet connected to the cooking chamber. To avoid possible protein damage due to cooking in a low moisture atmosphere, enough water was added to the ground beans to increase their moisture content to 21%. The beans were cooked and agitated for 35 minutes at a maximum temperature of about 212° F. at which time the steam was cut off, but the agitation continued for another five minutes to permit cooling.

"The batch-processed soybeans also produced poorer feeding results than was obtained with control birds on normal rations. However, when menhaden fish meal, condensed fish solubles, fermentation dried solubles and a fermentation product were added to the basal diets, the results were improved. The difference was only slightly in favor of the control group birds. These results are promising and indicate that the batch method, under precise controls, probably can be used to process unextracted soybean meal with a high feeding value."

Among other broiler reports at the field day will be reports on effects of ½, ¾, 1 and 1¼ sq. ft. of floor space per bird on growth, feed efficiency, market quality and production costs; mechanical vs. band feeders; antibiotic potentiation and environment studies.

There also will be an exhibit showing use of hay pellets for livestock.

TOURING EUROPE

MOBILE, ALA.—Bill Westerman of Oyster Shell Products Co., Mobile, and his son Billy are spending the summer touring Europe. They report that they are enjoying it very much.

NEW FEED PLANT—The new Supersweet Feeds plant at New Hampton, Iowa, is 112 ft. long, 80 ft. wide and about 50 ft. high. Above the 50-ton scale in the foreground are bulk tanks which will discharge finished feed at a rate of two tons per minute. At the left is the one story warehouse for ingredients and finished sacked feeds. Truck loading and unloading facilities are at the right.

Supersweet Opens New Iowa Plant

NEW HAMPTON, IOWA — More than 3,000 Iowa farmers and their families converged on New Hampton, Iowa, July 22, to help celebrate the grand opening of the new Supersweet Feeds plant there, according to Bill Hanson, Supersweet sales manager for the New Hampton area. Invitations to the day-long open house were issued by Mr. Hanson to every farmer living within a 30-mile radius of this northeastern Iowa town.

Also present were many Supersweet dealers from the area to greet their customers and familiarize them with the new plant.

"We are extremely optimistic about the future of the New Hampton area," said Mr. Hanson. "The response of our customers has been most enthusiastic and we are confident that with the opening of this new plant, our dealer organization in the area will expand rapidly," he said.

Mr. Hanson, a graduate of Iowa State, was recently appointed to supervise the sales activities in the area to be served by the new plant.

The plant, under construction since March, began producing finished formula feed July 16. The plant was not operating during the grand opening day so that visitors could thoroughly examine the interior of the building and the machinery.

Guests were served hot dogs and coffee. More than 40 door prizes were given away at Steffens Farm Store, the Supersweet dealer in the New Hampton area.

Freshly painted in a gun metal gray color, the plant produces 10 tons of finished feed an hour according to Mr. Hanson. The building is 112 ft. long, 80 ft. wide and about 50 ft. high.

On one side of the building is a 50-ton scale to accurately weigh incoming shipments of ingredients and outgoing loads of finished feed.

Above the scale are large tanks which hold finished feed in bulk.

A permanent railway spur has been constructed from the Milwaukee tracks near the plant to enable incoming railway shipment of ingredients. To make deliveries of finished feeds, a number of Supersweet trucks will be stationed permanently at the plant.

"The plant is able to produce and distribute a complete line of more than 60 different animal and poultry feeds in meal, pellets, crumbles and concentrates," said Mr. Hanson.

This is the first time in Supersweet Feeds' 7-year history that it has constructed a new feed plant. Supersweet has eight other plants in Iowa, Minnesota, Nebraska, Kansas and Illinois.

"We have sufficient space inside the plant to install more machinery when it's needed," said Mr. Hanson. "As more customers are added, and more feed is needed, we'll simply put more machinery in the plant to manufacture it."

Practically as soon as the Supersweet plant at New Hampton went into production, a new plant, to be built in Madison, Wis., went on the drawing boards. It will be similar in construction to the plant at New Hampton.

GRAND OPENING—Dick Johansen, plant manager, is showing a pellet mill to one of the many farmers who toured the New Hampton plant during its grand opening celebration.

First Alabama Auction Scheduled for July 27

CULLMAN, ALA. — The recently organized Alabama Poultry Exchange has scheduled its first auction here for July 27. Sales are to be held Monday, Wednesday and Friday of each week beginning at 1 p.m.

Approximately 40 stockholders each the owner of a $100 share of stock, have been signed up by the exchange. The city of Cullman has leased a new building to the exchange for its auctions. No rent will be charged for one year.

E. B. Medlock, Dixie Home Feeds, Albertville, has been elected president of the exchange. Other officers are A. W. Todd, Russellville, vice president, and Robert Batchelor, Haleyville, secretary-treasurer.

Directors are: Elmer Snyder, Scottsboro; Dewey Gibbs, Heflin; Lewis Lason, Jr., Greensboro; Raymond Cunningham, Jasper; John Bagwell, Empire, and L. A. Murphy, Russellville.

Southern States Co-op Announces Feed Plan

RICHMOND, VA.—An increase of 12% in formula feed volume has been set as the goal of a new fall feeding program of Southern States Cooperative. The co-op's publication, Service Guide, announced that the program will be known as the Bonus Feed Plan and will run Aug. 1 through Oct. 31.

During August, September and October co-op patrons will receive a 50¢ Bonus Coupon for each 500 lb. of Southern States Bonus Feeds purchased. These coupons may be used as cash Aug. 1-Dec. 15 toward purchases of any SSC farm supply items.

Down Trend Noted For Soybean Meal

After reaching their highest level in six months at the end of June, soybean meal prices have started to slide backward. The change, so far, has been slight, however, and prices are still well above early June levels when reports of processing plant shutdowns began to sprout.

For example, the Chicago quotation this week on 44% protein unrestricted meal, basis Decatur, was $58 ton. A week earlier the price was near $59. On June 11 the quote was $54.

Slower demand by feed manufacturers was blamed for the weakening soybean meal market, whereas reported tight supplies were mainly responsible for the earlier increases.

There is practically no interest in meal beyond July shipment, since the price will largely depend on current weather conditions.

Animal Nutritionist Joins Pfizer Staff

NEW YORK—Dr. Charles M. Martin, animal nutritionist, has joined the staff of Chas. Pfizer & Co.'s agricultural research and development center, Terre Haute, Ind.

Dr. C. M. Martin

Warren M. Reynolds, manager of agricultural research, says that Dr. Martin will work in the center's development department, with responsibilities of supervision and coordination of large animal nutrition research in cooperation with experiment stations and commercial growers.

Dr. Martin holds a bachelor's degree in agriculture and a master's in animal nutrition from the University of Kentucky, and a doctorate in animal husbandry from Cornell University.

Before joining the Pfizer staff, Dr. Martin was with the Quaker Oats Co. for three years, first as a livestock specialist and then as district sales manager of the firm's southeastern feed division at Chattanooga, Tenn. Following his Cornell studies, he was associate professor in the animal husbandry department of Alabama Polytechnic Institute for four years.

He is a member of Block and Bridle, Alpha Zeta, Sigma Xi and the American Society of Animal Production.

$45,000 FIRE

SAN ANTONIO, TEXAS—Fire believed caused by spontaneous combustion caused an estimated $45,000 damage to the Louis Feed Mill recently. Damage to the building was set at $15,000, while loss to contents was estimated at $30,000.

Faubus Blasts New Egg-Grading Law

LITTLE ROCK, ARK.—Orval E. Faubus, Arkansas governor, has blasted the new state egg-grading law which went into effect recently, threatening to call a special session of the legislature to protect what he called the economy of the small farmer.

Governor Faubus declared that the law—Act 94 passed by the 1959 General Assembly in an effort to keep producers from dumping low-quality eggs on the market—apparently is hurting the small family farmers.

The governor said he had been told the law was "penalizing farmers who tried to market their eggs." He declined to go into detail about the reports.

"I think the law is basically sound," he said, "but unless the market for small farmers is restored I may call a special session and have it repealed."

"I'm telling those who got the law passed to get together," he warned. "If they can't correct the situation, I will call a special session of the legislature and have it done."

The law requires the grading, stamping and packaging of all eggs sold at retail levels.

Dr. David Ibsen, state veterinarian, said there is "considerable unrest because of the law." He said most of the concern is based on what he termed "misinformation."

He blamed "roving egg peddlers" for spreading the misinformation about the egg act in rural areas. "We hear of these people telling small farmers that they doubt they will be in business much longer because of this regulation."

"This is untrue, but the farmer becomes alarmed and the word spreads rapidly," the state official said. He said the egg division of the Livestock Sanitary Board has been trying to counteract these reports.

"The act was designed to protect the urban customers where 90% of the eggs are bought. The intent was to protect the state against being a dumping ground for inferior, mislabeled eggs coming in from other states," Dr. Ibsen said.

A meeting between the board and large egg packers and producers to discuss the situation reportedly is being arranged. The livestock sanitary board is responsible for enforcing the law.

Meanwhile, poultry industry officials expressed the belief that a general weakness in the egg market, rather than a basic flaw in the law, is responsible for the "hardships" of small producers.

Observers noted that the law exempts producers who own fewer than 100 hens and sell their eggs directly to consumers. And, producers with more than 100 hens may obtain a special permit to grade and pack their own eggs if they sell and deliver eggs directly to their customers.

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PROCESSING OF SOYBEANS FOR BROILER FEEDING

"The processing of soybeans, fat intact, appears promising, especially from an efficiency of feed utilization standpoint. . . . Although this product produced gains comparable to those of soybean oil meal and animal fat, it is highly probable that more research will result in even greater advances."

By Dr. E. L. Stephenson and Leland Tollett
University of Arkansas

A considerable quantity of soybeans has been processed annually and the soybean oil meal resulting from this processing found to be highly satisfactory as a protein source for poultry feeds. A tremendous volume of research data has been compiled relative to the processing of these soybeans for the production of a soybean oil meal having protein of the highest nutritive value. Most of the work, however, has been directed toward the production of soybean oil meal rather than the processing of the whole soybean. This is understandable since soybean oil was more valuable than soybean oil meal.

Borchers et al. (1947) and Hayward et al. (1936) have reviewed the early work relative to processing of soybeans for the production of soybean oil meal. Noteworthy among these early experiments were those directed toward cooking of the soybeans or soybean oil meal in order to improve the nutritive value. The early research workers found that heat was necessary to destroy a trypsin inhibitor in the soybean, thus producing a product which would elicit greater and more efficient gains in chicks. In 1947, McGinnis and Evans found that the quality of soybean oil meal could be further improved by autocalving the product, rather than processing it with dry heat.

As has been previously stated, soybean oil for many years was a more valuable product than soybean oil meal and consequently little consideration was given to processing the soybean, oil intact, as a feed ingredient. Several developments since World War II have, however, rendered the fat less valuable and it now appears feasible to consider the processing of soybeans without removing the fat.

Research at the University of Arkansas has shown that soybean oil is a highly acceptable fat for use in broiler feeds. In a series of experiments, it was found to be equal and in many cases superior to the animal fat used. With these facts in mind, a series of feeding trials were initiated to study various cooking methods for processing whole soybeans for use as an ingredient for chick feeds. Most of the broiler diets now used in the Arkansas broiler area contain relatively large amounts of dehulled soybean oil meal. For this reason, the soybeans used in these experiments were also dehulled and flaked before they were given the various treatments of temperature and moisture.

(In Trial 1 the flakes were cooked in a rendering plant cooker and in Trial 2 they were processed in a laboratory autoclave.)

After cooking, the moisture was removed as efficiently as possible with the equipment used (rendering plant cooker) and the resulting product ground before incorporating into the diets. The cooked dehulled soybeans were added to the basal diet at the expense of all soybean meal, all animal fat and part of the yellow corn in the diet on an equi-protein basis. The composition of this basal diet is shown in Table 1.

TABLE 1. Composition of Basal Diet

Ingredients	Amt./100 lb. feed
Ground yellow corn	58.6 lb.
Soybean oil meal (dehulled 50% protein)	25.0 lb.
Alfalfa leaf meal	2.0 lb.
Fish meal (herring)	5.0 lb.
Ground limestone	1.4 lb.
Dicalcium phosphate	2.0 lb.
Salt	.5 lb.
Animal fat (tallow)	3.0 lb.
Premix E*	2.5 lb.
Manganese sulfate	8.0 gm.
Nicarbazin	22.7 gm.

*Premix E supplied 2 lb. dried whey, 22.5 gm. DL Methionine, 120 mg. riboflavin, 265 mg. calcium pantothenate, 660 mg. niacin, 200,000 U.S.P. units vitamin A, 50,000 I.C.U. vitamin D_3, .5 gm. procaine penicillin and 1.5 gm. B.H.T. per 100 lb. feed.

TRIAL 1

TABLE 2. The Effect of Cooking Time and Added Water on Nutritive Value of Soybean Flakes

Diet	Time cooked* minutes	H_2O added, %	Sexed Av. wt. (8 wk.)†	Feed/gain, lb.
1 Basal			2.35	2.39
2	30	20	2.33	2.39‡
3	60	20	2.29	2.20
4	90	20	2.03**	2.57
5	30	30	2.33	2.32
6	60	30	2.30	2.46
7	90	30	2.25	2.48
8	As Diet 1 + 3.75% animal fat (tallow)		2.32	2.39

*Cooked at 6 lb. pressure.
†Each diet was fed to two pens of 80 chicks (mixed sex) each.
‡All diets which were cooked contained more moisture than Diets 1 and 8, thus these diets were somewhat more efficient than these data indicate.
**When compared to weights of chicks fed Diet 1, the mean difference was statistically highly significant (P = .01).

TRIAL 2

TABLE 3. The Effect of Temperature and Cooking on Nutritive Value of Soybean Flakes

Diet	Time cooked† minutes	Lb. pressure	Av. wt., 3 wk.‡ gm.	Feed/gain gm.
1 Basal			261	1.52
2	20	6	219**	1.63
3	20	10	227**	1.53
4	30	6	257	1.41
5	30	10	252	1.49
6	45	6	248	1.42
7	45	10	246	1.45
8	As Diet 1 + 3.75% animal fat (tallow)		261	1.53

*30% H_2O was added to all diets.
†Each diet was fed to four pens of 10 chicks each.
**When compared to weights of chicks fed Diet 1, the mean difference was statistically significant (P = .05).

In experiment 1, Table 2, the variables were cooking time and percentage of water added. Six pounds of steam pressure were used in all treatments in the experiment. As shown in the experimental summary, (Table 2) the cooked products were added to Diets 2, 3, 4, 5, 6 and 7. Diet 8 was identical to Diet 1 with the exception that animal fat was added to the extent that this diet was approximately equi-caloric with the diets which contained cooked soybeans. Each diet was fed to 2 pens of 80 chicks (mixed sex) each.

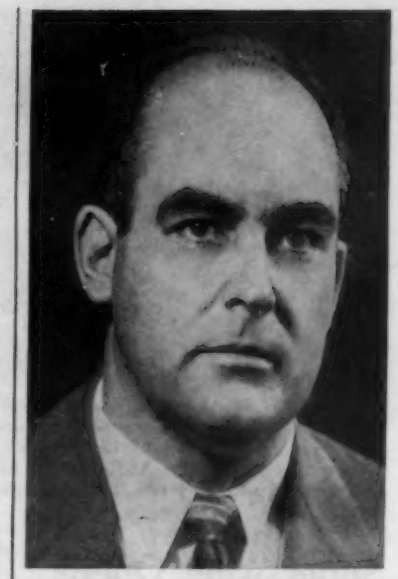
An analysis of the data produced in this feeding trial indicated that increments of time greater than 30 minutes were not necessary to obtain a product which would produce optimum growth. In fact, these greater increments of time tended to depress growth, with the chicks receiving the soybean which had been cooked 90 minutes with 20% added water being significantly (p = .01) smaller than the birds receiving the basal diet. The addition of 30% water during cooking tended to decrease this growth depression in that the soybeans cooked 90 minutes with 30% added water produced gains that were not significantly different from those produced by the basal diet. Growth in both cases, however, tended to decrease as the cooking time was increased. With the exception of Diet 3, efficiency of feed utilization was also decreased when cooking time was increased. We have no explanation for the apparent increase in efficiency in Diet 3 and we have not been able to repeat this in later trials.

It should be pointed out that in the above experiment the equipment used did not satisfactorily reduce the moisture to the level desired and that diets which contained the cooked soybeans contained 3-5% more moisture than did the basal diet. Since evaporation occurred during storage, it was impossible to remove this error by calculation and the diets were actually more efficient than the data indicated, since the feed per pound of gain data included a certain amount of added moisture.

Experiment 2 (Table 3) was designed to study cooking time as well as pounds of pressure used in cooking. The object of this study was to determine whether cooking time could be reduced if the cooking temperature was increased. The diets in this trial were each fed to four pens of 10 chicks (mixed sex) each. An analysis of these data indicated that a cooking time of 20 minutes was not satisfactory (although the steam pressure was increased to 10 lb.) since the weights of the birds in both cases (two different steam pressures were used) were significantly depressed.

Here again, the more efficient feed utilization was obtained when the soybeans were processed for 30 minutes at 6 lb. of steam pressure with 30% of added water. In this particular study the soybeans were processed in a laboratory and water could be removed without damaging the product. A study of the data in this experiment indicated an improvement in efficiency of feed utilization when the soybean received the optimal cooking treatments. There was no significant differences in rate of gain except in Diets 2 and 3 which were significantly depressed.

In summary, we conclude that the processing of soybeans, fat intact, appears promising, especially from an efficiency of feed utilization standpoint. In these studies, optimum performance was obtained when the dehulled soybean flakes were cooked 30 minutes at 6 lb. of steam pressure with 30% of added water. We would also predict that although this product produced gains which were comparable to those produced with soybean oil meal and animal fat (with more efficient utilization of feed), it is highly probable that, with additional research, more advances may be made in this regard.



Dr. E. L. Stephenson

AUTHOR—Dr. E. L. Stephenson, professor of animal industry and nutrition at the University of Arkansas, is a native of east Tennessee and received his bachelor's and master's degrees from the University of Tennessee. His Ph.D. degree was obtained at Washington State College in poultry nutrition. He has been at the University of Arkansas since 1949, conducting research and teaching. Having worked for a time with both swine and poultry, Dr. Stephenson is now confining his research to poultry. His projects include unidentified factors for chickens, amino acid interrelationships with chickens, unidentified factors for growing poults and hatchability factors for turkeys and hens. In his studies he has worked closely with the poultry feed industry.

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Cargill Promotion

MINNEAPOLIS—William H. Fisher has been named manager of the Pacific Northwest region of Cargill, Inc., according to an announcement from the firm's headquarters at Minneapolis.

Mr. Fisher will head Cargill's regional office in Portland, Ore., replacing Floyd S. Robert, who retired recently. Mr. Fisher joined Cargill in 1946, and has held various merchandising and managerial posts at Sioux City, Iowa; St. Louis; Chicago; Ft. Worth; San Francisco and Portland.

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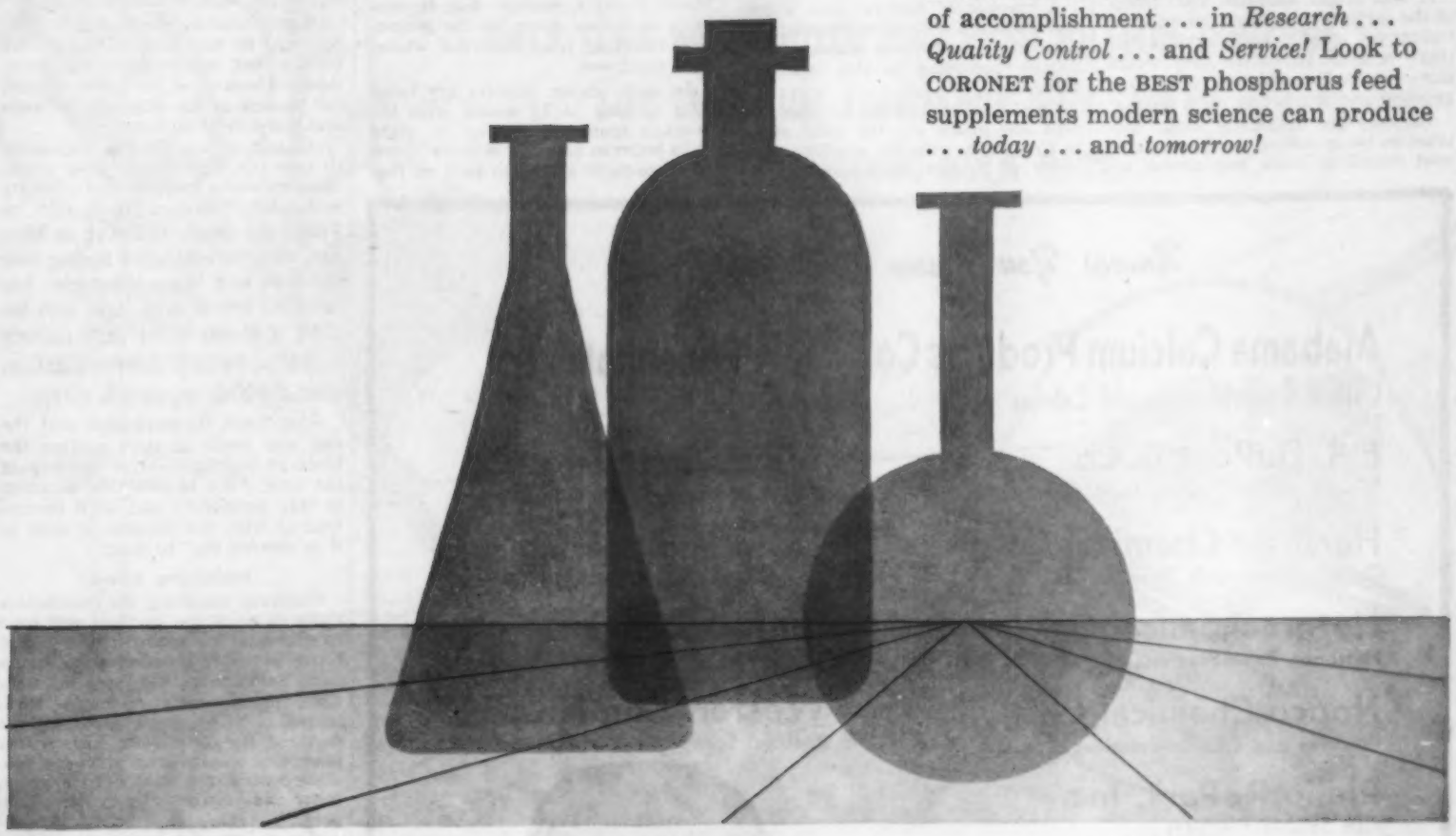

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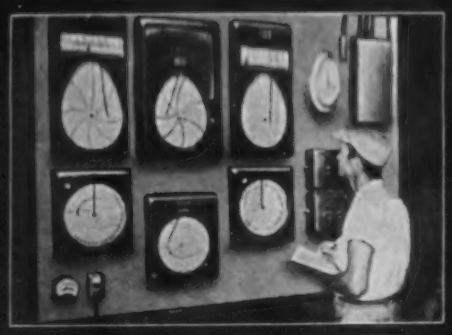

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Survey Brings Out Opinions On Georgia Broiler Industry

By Special Correspondent

GAINESVILLE, GA. — Recent interviews with key people in the north Georgia broiler industry revealed that some believe that if the contractors can't get some price relief soon, it is possible that banks and feed manufacturers will become more directly involved in the broiler growing business. However, most of the industry representatives who talked with this reporter, feel that such a possibility is unlikely.

It was freely admitted that many of the large feed manufacturers were tightening credit considerably, but there is little indication they would move in and completely take over growing and marketing of broilers.

Bankers are optimistic about contractors being able to survive the current economic crisis and appear reluctant to try their hand at raising chickens.

None of the persons interviewed said the government could straighten out the sagging prices with controls. One grower said he was so disgusted with the administration's price support on grain he sometimes wishes that "Ezra Taft Benson would try his hand at raising broilers with all the obstacles the U.S. Department of Agriculture is throwing up."

Many Factors

A number of factors, both within and outside the broiler industry, are responsible for present economic conditions, according to this reporter's survey.

Chief factors blamed for the current low prices are the A&P strike in New York, with the resulting slowdown of broiler purchases in that area, and a "resentment" on the part of some chain buyers due to recent efforts to eliminate the "two-price system" of marketing and merchandising broilers at the retail or consumer level.

Few contractors believe there is any over-production of broilers to the extent the market is glutted, "unless there are more broilers being grown than are reported," as one contractor commented.

The absence of large cold storage inventories of broilers was cited as reason to believe there is no severe problem of over-production. Slaughter reports, it was pointed out, have coincided closely with reported weekly sales. However, there has been a noticeable back-up of live birds in North Georgia, mostly due, it was said, to a slow down by the processors resulting from curtailed wholesale purchases.

In many cases, broilers are being held as long as 12 weeks, with the average span ranging up to eight days between sale and delivery. Some of these birds are being kept on feed because the contractors have been unwilling to accept offered prices at the auction as well as by processors at the plant.

Tom Hodge, manager of the Georgia Paultry Exchange at Gainesville, said that while the number of broilers offered was increasing, the volume which is "no saled" has shown proportionate increases.

Many of these birds are sold after the auction at private treaty, but there is no way to determine the price.

Without exception, those interviewed expressed confidence in the ultimate success of the poultry auction and indicated the opening of auctions in other broiler producing areas showed how much the industry was supporting such a sales program.

One contractor, who shared this belief, said he had been selling on the auction but discontinued the practice, not because of the prices offered, but because of the long span between sale and date of pickup.

He said it was all but impossible to feed the birds under these conditions without a great deal of difficulty in handling the feed. Birds sold on Friday are usually picked up on Monday, with the contractor feeding over the week end. When this period was extended two or even three days beyond, it means either daily delivery of feed or sacking up large quantities after the birds are moved.

Sometimes, the contractor said, the call was made to start crating the birds at midnight—after delivery of the feed. "We believe this situation is only temporary and we'll resume trading with the auction as soon as it is cleared up," he said.

Stabilizing Effect

Generally speaking, the contractors think more of the auctions will tend to stabilize the entire industry and bring about a sounder price structure. Some think the price differential between some areas may be eliminated, or at least minimized. Others declared the Gainesville auction was improving local selling practices, too, since contractors no longer view each other as competitors within the area.

Dennis Stringer, Atlanta USDA market reporter, said that when the volume of birds sold at the auction here is materially increased, it is the plan of his office to base the daily market quotation on the auction's price and volume.

He reported that of the six to seven million broilers produced weekly in the north Georgia area, less than two million are sold to processors under direct control or prior commitment—in other words, under completely integrated operations.

"Many people look on north Georgia broiler production as a completely integrated deal—from baby chick to packaged product," he said.

"This is true in probably 95% of the cases, from the grower level up to the contractor, but that condition materially changes between the contractor and the processor. Our records indicate there are approximately four to five million birds available for public bidding every week."

When the greater part of this volume of "free birds" is sold through public auction, many contractors believe the prices will show sufficient increases to warrant some profit margins. But there was no one to venture a prediction when this time will come.

Few contractors think a complete stoppage of all broiler growing for a

(Turn to SURVEY, page 80)

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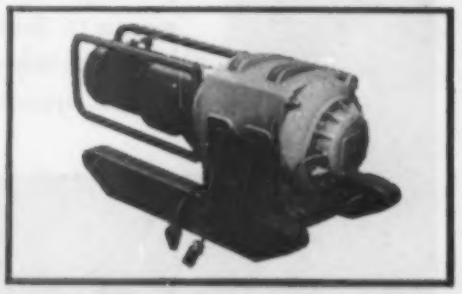
DALLI – Popular standard model. Output – 30 tons of soft feed per hour. Generates a pull up to 1400 pounds. Powered by a 2.5 HP electric motor (220-440 volts) or 5 HP gasoline engine. It weighs 480 lbs.

BULLY – Extra power for heavier jobs and increased efficiency. Output – 40 tons of soft feed per hour. Generates a pull of 2400 pounds. Powered by a 3.5 HP electric motor (220-440 volts) or 8 HP gasoline engine. It weighs 870 lbs.



MOBY – A duplex unit, basically the same as the BULLY model. Output – 80 tons of soft feed per hour. Operates two scoops, each independently controlled by push-button switch. It weighs 946 lbs.

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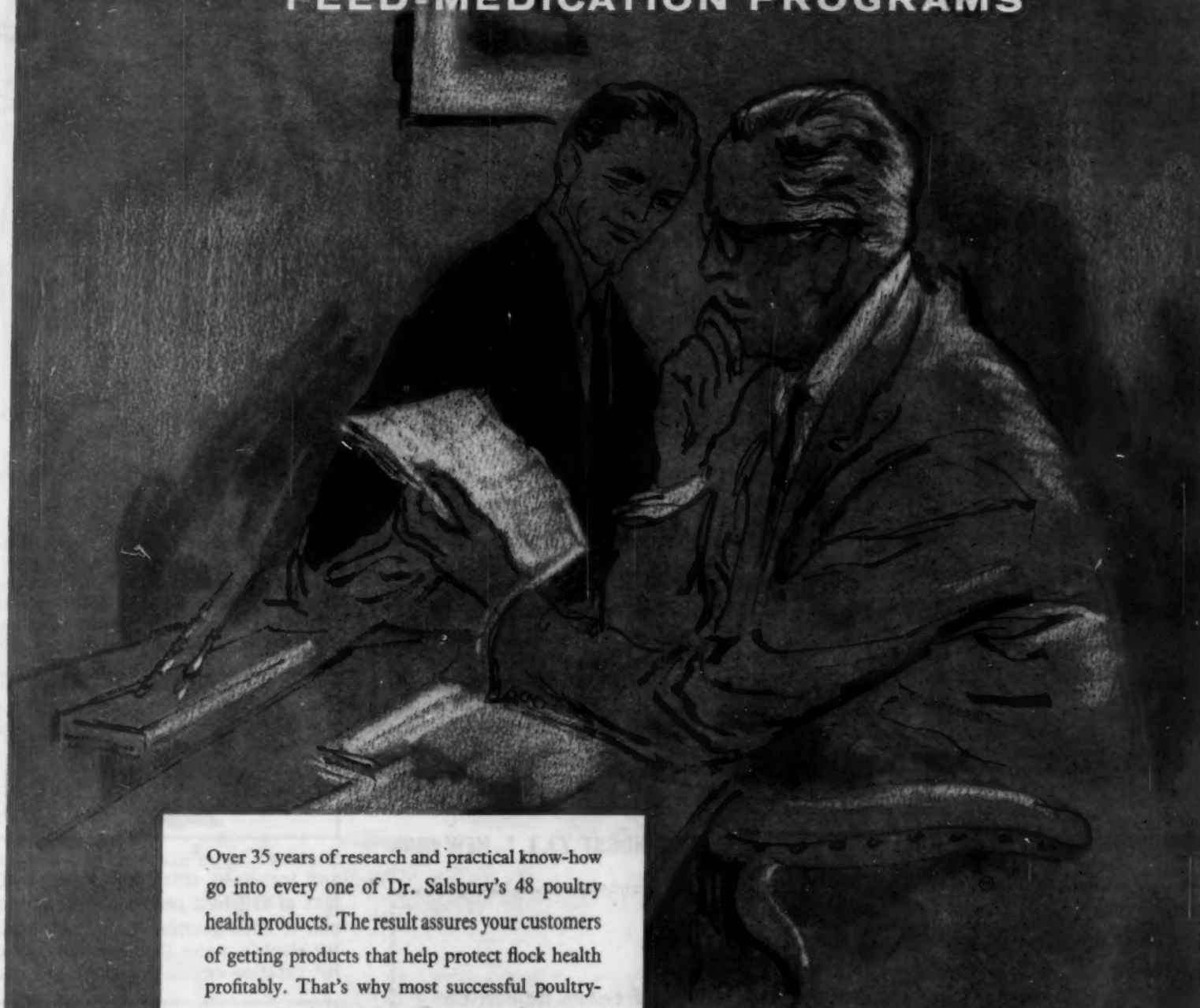

Over 35 years of research and practical know-how go into every one of Dr. Salsbury's 48 poultry health products. The result assures your customers of getting products that help protect flock health profitably. That's why most successful poultrymen use Dr. Salsbury's products year after year—they know they can depend on this time-tested, scientific approach to poultry health problems.

However, proper medication is only one part of good flock management. For best results, growers should practice sound feeding, housing, sanitation and pest control.

Dr. Salsbury's Field and Laboratory Services Make Your Feeds More Salable...

The feed industry looks to Dr. Salsbury's for additives that protect health and promote efficient poultry production. But—more than for products alone—we are known for SERVICE.

SERVICE IN THE FIELD

Every one of Dr. Salsbury's 73 field service representatives (Territory Managers) has the training and experience to provide the advice you often need on poultry disease and medication.* He keeps informed on industry problems—so let the Dr. Salsbury man show you how scientific feed-medication programs can gain for you greater customer acceptance and satisfaction.

**When difficult problems arise, Dr. Salsbury's regular field service representative may call on a corps of Technical Service Advisers from the Laboratories.*

IMPROVE YOUR OWN FIELD SERVICE

specialized training available to your staff

Dr. Salsbury's offers short courses that provide practical training in poultry disease and methods of prevention and control. Over 10,000 students from the poultry and feed industries have benefited from this training. Inquire about training for your service personnel.

SERVICE AT THE LABORATORIES

Behind our nationwide service stands science—science that specializes in poultry health. Our staff of research specialists are keenly aware of the need for feed-medication programs that work in the field. Therefore, whenever research develops a product, practical procedures are a must—to make it successful for use in the feed industry.

In the interest of the entire poultry industry, Dr. Salsbury's Laboratories is running a full-page ad (shown at right) in the July 6 issue of LIFE magazine. It will tell millions of Americans why the chicken they eat is better than ever before. It also credits developments in feeds and nutrition with contributing to today's better broilers. This type of advertising is typical of Dr. Salsbury's service to the feed and poultry industries.

At Dr. Salsbury's, science and service go hand-in-hand to provide you with superior feed additives that work in the field. Write, wire, or phone for quick, expert advisory service on poultry disease and medication.

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NATIONWIDE SERVICE TO THE FEED INDUSTRY

Arkansas Dealer Succeeds With Semi-Integrated Poultry Program

By Jess F. Blair
Feedstuffs Special Writer

In Arkansas there are various kinds of integrated poultry plans. They range all the way from the feed dealer furnishing everything but the building, to a plan where he sells only the feed and buys the eggs.

This semi-integrated plan was the one that appealed to Ross Maddox, Hot Springs, Ark., feed dealer. He was interested in selling more feed without the big investment needed for full scale integration.

After starting a few years ago, about 40,000 laying hens are now being fed under the plan. The number is gradually being increased but there is no haste in this expansion.

"It's a big undertaking, a project like this," he said, "and the feed dealer must sort of grow into it. We had some problems, but after three years we've overcome the main ones."

In talking to potential customers, Mr. Maddox presents them with a printed list of requirements and goes over each item carefully. If a farmer already has buildings suitable for conversion to poultry houses, these are used. More often, however, they must be built. Any type of recommended house may be built.

EXPANDING BUSINESS—Shown is the Ross Maddox Feed Co. plant at Hot Springs, Ark. The firm's business volume was dropping until Ross Maddox, the owner, launched a semi-integrated poultry project of 40,000 layers, which doubled his volume.

The producer must provide a hanging type feeder for each 100 birds, have one nest for each five hens and allow a 7-in. roosting space per hen. Also he must install automatic waterers with a heating device to prevent freezing.

"We make these requirements because the producer must keep labor down to a minimum or he will become dissatisfied," said Mr. Maddox. "Also his production is likely to drop below the minimum of 60%."

He believes in good equipment but not necessarily a high investment. Some things may be added as the farmer gets in better financial condition.

The producer is required to buy a cooler so eggs can be stored on the farm. He does no grading or candling.

POULTRY PLANNING—By promoting a laying hen project of 40,000 birds, Ross Maddox, shown working at his desk, tightened up sagging sales and doubled his volume at the Ross Maddox Feed Co. in Hot Springs, Ark. Profits come from three sources —sale of feed, poultry supplies and medication and the sale of eggs.

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New PACAL HAMMER
holds 50% more tungsten-carbide

Note the Serrated Edge Design* on the PACAL Hammer at left in the picture above. Gives you more tungsten-carbide on the working surface of every hammer —50% more than on conventional hard-faced hammers. New PACAL Hammers sharpen as they wear, hold their edge, cut cleaner. Resists spalling or breaking away when subjected to shock and abrasion. Last 25% longer than the ordinary hard-faced hammers.

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Another major user of multiwall bags, the Smith-Douglass Co., Inc., of Norfolk, Va., has reduced bag costs with WONDERWALL, the tougher, cost-cutting new multiwall.

The Company's nine plants are strategically located in the Southeast, Midwest and Southwest, producing substantial quantities of fertilizer, nitrogen and P_2O_5, the latter for use as a phosphorus feed supplement as well as for mixed fertilizer.

"Because the WONDERWALL is so much tougher," states James A. Monroe, (pictured above) Vice President in charge of Operations, "we were able to lower our multiwall bag paper basis weight by 30 lbs.—from 220# to 190#, and secure a saving of $3.50 per thousand. Breakage was reduced, too."

The WONDERWALL is made with Kraftsman Clupak* paper. Its patented, built-in stretch resists impact and greatly increases toughness.

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West Virginia Pulp and Paper

but merely gathers and cleans the eggs. A company truck is sent to each farm regularly to pick up the cases of eggs.

Farmers may also use any type laying hen they desire. However, since Mr. Maddox insists upon only the highest type birds and can get them at a dealer's discount, most of the baby chicks or started pullets are ordered through him.

"We don't try to make a profit on the birds," he said. "We make it from the sale of feed and medication, though most producers also buy other supplies from us. We explain what may be needed but never insist that anything be bought which is not needed or that the producer can't pay for."

Extending Credit

The only credit the Maddox Feed Co. puts out is for feed. In getting started, the producer is given feed for a period of six months. The store takes a note on the chickens, but also tries to get some other security on the note. He helps the new producer finance buildings and birds by working with the banks and FHA.

"If the man has no capital or equipment at all, we find it's best not to work with him," said the dealer. "We tried to find young couples getting started or some family with good reputation and with a surplus of home labor. I don't believe any project such as this can succeed if financed 100%. You would get too many ne'er-do-wells and men who had failed at everything else."

In addition to giving credit and buying the eggs, Mr. Maddox has a service man who visits each flock at least once a week. He works closely with producers, points out how to achieve better production, and helps with such things as culling and medication.

Since 50% of any such project depends upon the producer, the Maddox Feed Co. tries to educate each family in better poultry methods.

After the producer gets that six months feed bill paid off through the sale of eggs, he is given a weekly check by the store. From it has been deducted the week's feed bill and whatever other supplies were bought.

In getting started, Mr. Maddox had to put in an egg room where eggs are mechanically sorted and cartoned. Most of them are sold in individual cartons to stores, restaurants and homes in Hot Springs and surrounding towns.

Feed Delivery

The firm can deliver feed in sacks or bulk. Most of the feed is mixed to order by Mr. Maddox's supplier, and shipped into Hot Springs. He has grinders and mixers at the plant for custom orders, but is not equipped to manufacture the highly-specialized growing and laying mash.

"This is sort of a voluntary program," he pointed out, "and a producer can quit anytime he is cleared with us on the books. So to keep them, we must make it worthwhile. This means giving a lot of services in advice and farm trips. When egg prices slump we must console our producers, and when eggs hit a peak we must try to prevent an over-expansion.

"Our main aim is to help farm families in this area make a better living. At the same time we must keep an eye on the markets and competition. It means getting a high conversion from each pound of feed, buying only the highest quality hens and feed, and holding down overhead. Every employee must produce."

Another thing, according to Mr. Maddox, is that the boss must keep an eye on everything. The whole program is built around him. He should personally know each producer and understand his problems. Also he cannot afford to hire a large group of experts. For a project such as this, one good service man is enough. Too many experts raise the operational costs and often may not work well together.

Super Market Institute Runs Egg Campaign

CHICAGO, ILL.—Member companies of Super Market Institute have used advertising space in newspapers with circulations totaling nearly 20 million this month to wage an egg promotion campaign.

The campaign was launched to help farm producers suffering from a price squeeze induced by a heavy spring supply of eggs that threatened to last well into the summer, according to company officials.

G. Chester Freeman, chief of the food trades branch of the food distribution division, U.S. Department of Agriculture, made this comment on the SMI campaign:

"We have no words to adequately express our admiration for the extraordinary advertising packet developed for your members. The compelling sales impact of these outstanding layouts is sure to be reflected in an upsurge of sales in your member stores everywhere."

Poultry Lab Planned

ROSE HILL, N.C.—A poultry disease diagnostic laboratory will be set up in Rose Hill to serve southeastern North Carolina poultry industries and producers, according to Vernon H. Reynolds, Duplin County farm agent. Funds for the laboratory were made available in the last General Assembly, when $37,000 was set aside. The county board of commissioners has made available a building for the poultry laboratory.

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Research News AND Review

A roundup of scientific information prepared for the feed industry
Reprinted complete from AGRAData, Vol. 2, No. 11

Pfizer

Dog Feeding

The companionship of men and dogs is one of the oldest. It promises to continue and to grow as long as there are men on earth. To many people no human investment gives a greater return of satisfaction in living than does the money spent for dogs and their maintenance.

Dogs are especially important for people at the extremes of life, when companionship is the most needed. They provide pleasing playmates for the young and companions for the old. Both of these age groups of people are increasing so we can expect the population of dogs to grow at about the same rate. The use of dogs and other pets in homes for the aged has made little progress but some day these homes may discover that the dog is one of the most useful servants it can employ.

The dog population of America is steadily increasing. A recent census shows there are 25 million dogs in the U.S. The industry of producing puppies and supplying the market is larger than the combined value of sheep and swine produced and sold in the one state of New York. This industry usually attracts little attention because it is in the hands of families.

Dog production and dog boarding afford ideal occupations for older people who wish to live on the edge of cities and earn a modest income in work that is interesting and not too strenuous. However, people who desire to enter the dog industries should do so in middle life in order to gain experience.

Although the span of life of the average person increases somewhat from year to year, it is doubtful if this is true for the dog. The hazards of living were few for dogs in the days of our fathers and grandfathers. A dog could move fast enough to escape the hoofs of a horse and could survive being run over by the light wheels of a buggy, but the weight and speed of automobiles brought new hazards for the dog of modern times.

Dogs of our grandfathers' day certainly had fleas and tapeworms but they escaped the parasites that arise from concentrated living such as Ascarids, Hook Worms and Strongyloides. No attempt was made to immunize them against distemper but they were protected by relative isolation. Even in our day one research laboratory that buys dogs from surrounding farms finds they are very subject to distemper.

The typical American dog is better fed than the average person because he is protected by his primitive tastes and by the never ending activities of applying modern science to the dog feed industries. Man early loses the asset of his inherited abilities to select the best foods because he is early conditioned to eating in excess, specially refined products such as sugar. The human taste for sugar probably served in early times to induce man to eat fruit and thus get ascorbic acid and other substances into his diet. The dog seldom, if ever, requires ascorbic acid in its diet and seldom has a taste for fruit. Occasionally dogs develop special tastes for salads and tomatoes but such food habits are rare. In one large American kennel containing several breeds were two Dalmatians that were very fond of lettuce and mixed salads. These rare dogs would eat a pound of sliced tomatoes as if they were meat. However, most dogs dislike such products. The unique internal metabolism of the Dalmatian may influence such tastes.

The peculiar nature of a modern economy tends to give the dog a diet superior to that of his master. Manufacturers of dog feeds try to incorporate an excess of all essential nutrients needed by a dog. This is then marketed as one unit in a can or in the form of meal or biscuits. Many dogs are maintained for long periods upon the feed of a single manufacturer. If this proves incomplete the maker is bound to lose his market when the dog fails. Man has a simple means of detecting the adequacy of a diet by the health of his dog.

In contrast to the diet of a dog, that of a man is combined by himself from choices of hundreds of foodstuffs. Every man is his own nutritionist since he selects his food at home or at the restaurant. Man serves the function of the feed manufacturer for himself. The average person cannot have the knowledge of nutrition possessed by the specialists who design dog feeds. Furthermore, man is constantly tempted by his tastes for special products to eat an inferior diet that may be quite deficient. Therefore, the average man might not enjoy his meals as much but might have much better health if he shared the feed of his dog.

Furthermore, the number of dogs that enjoy exercise until they are very old is far greater than the number of men who take a comparable pleasure in exercise. The number of dogs that ride in automobiles is small compared to the number of men. Hence, the dog has the asset of more exercise than has his master. This factor must have a profound influence upon nutrition and health.

Nutrition for canine longevity . . .

In large kennels one third of the puppies die between birth and four months of age. This causes substantial economic losses. No one has an accurate knowledge of losses in small kennels although it is probably less. It probably varies

much among the breeds but accurate figures are also lacking. Losses seem to be less among the spaniels such as the cocker than among the hounds such as beagles.

A substantial number of puppies die during the first two days after birth. At times whole litters may be lost. The mother may refuse to care for the puppies. She may even eat them. The belief is common that puppies are sorted from litters and rejected by the mother because instinct tells her they are defective. This is difficult to prove.

Since a lactating dog must give as much milk as a cow in proportion to her body weight, she needs to be fed heavily from the last few weeks of gestation to the end of lactation. During this period diets are commonly supplemented with milk and raw organ meats such as kidneys and liver. There seem to be factors in these that are relished by the dog.

During the lactation period dry skim milk can be fed to the bitch to provide ten per cent of the calories. If this level is exceeded a continuous diarrhea is produced by the lactose. This adds to the problem of keeping quarters for the dogs clean and may even waste nutrients from the food of the bitch. During the whelping and nursing period bitches can be kept in the pens with expanded metal bottoms if a wooden box is provided to keep the puppies off the open floor. The expanded metal should be flat and provide different size openings for various breeds of dogs.

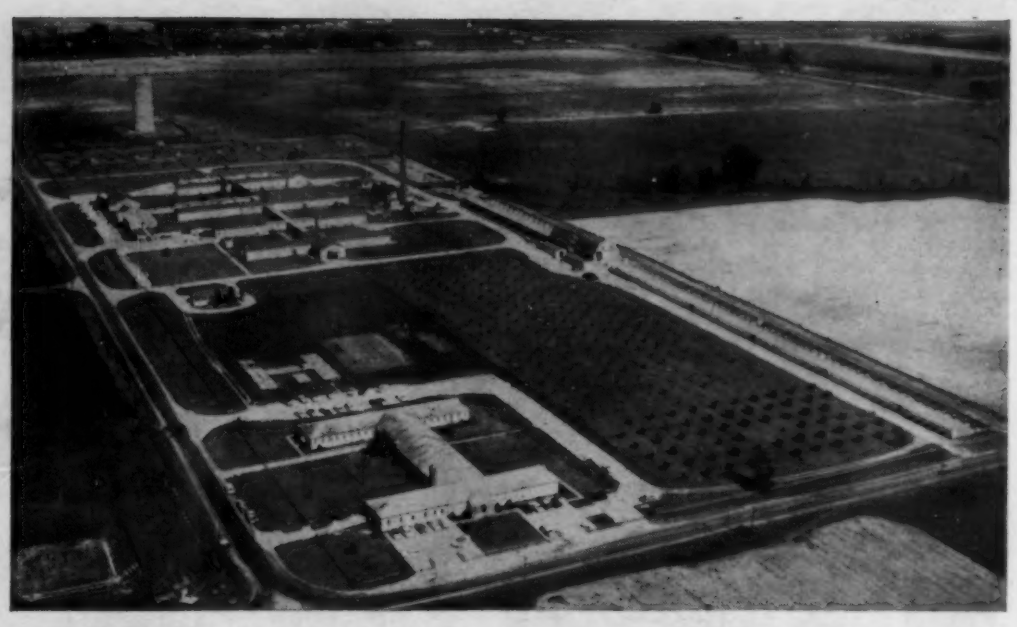
Unlike other species such as white rats, the dog does not seem able to adjust to high levels of lactose in the diet. Within two weeks a white rat can correct the diarrhea from lactose fed at high levels but dogs seem unable to do this. No one has tested the possibility of introducing special bacterial flora from the adjusted rat into the intestine of the dog, in order to feed high levels of milk to the lactating bitch.

Orphan puppies can usually be reared upon evaporated milk. The milk of the dog contains the same level of ash and protein as evaporated milk. However, the milk of the dog has twice as much fat but only a third as much lactose as that of the cow. Some kennels keep goats to provide for puppies. The milk of the goat seems very satisfactory, but has never been given a test in comparison with other forms of processed milk.

The most important factor in the rearing of puppies is nutritional deficiencies caused by intestinal parasites. The most common of these are the round worm or ascarids. Attempts have been made to control these by introducing drugs into the normal diet of the bitch. When about half through the lactation period at an age of two to three weeks puppies are often treated to avoid the massive development of round worms that may occur about this time. Heavily infested puppies suffer in growth and development even when well fed.

Modern outdoor runs have now been developed that keep breeding animals as well as puppies from contact with soil or concrete. In time such handling combined with drugs may eliminate the heavy toll that is now taken of puppies and profits in dog kennels. However, this is being done for swine and the methods may prove applicable to puppies since they are no more difficult to handle than young pigs.

Most dog feeds contain fat added in the form of meat products in canned feeds or as tallow to dry feeds. The dog utilizes more than ninety per cent of the fats such as tallow but cannot utilize harder fats that are hydrogenated to increase the melting point above that of tallow. In times past such fats have been sold to the dog feed industry because they pour easily, like sand, and do not melt in warm weather. However, such fats seem to have now disappeared from the market.



RESEARCH FARM—Most nutritional studies and experimentation for the development of newer and better ways to improve the gains of pets, livestock and poultry are developed, tested, and proved here on the Agricultural Research Center of Chas. Pfizer & Co., Inc., near Terre Haute, Indiana.

Puppies digest and absorb a lower percentage of nutrients than do adult dogs. This is too small to be of much significance. It is probably due to the speed with which puppies eat and the diarrhea that often arises as the result of eating too much. Restricted feeding three or four times daily will usually eliminate this diarrhea of puppies.

Dogs tolerate levels of fat as high as twenty per cent during both the growth period of puppies and the life of adults. No one has related atherosclerosis to the degree of saturation of fat in the diet of dogs. At least three reasons for

this are evident. Few dogs survive long enough to develop atherosclerosis. Dogs are quite resistant to cardiovascular diseases. Finally, dogs exercise throughout life and this may be a potent measure against atherosclerosis.

In using fat in the dry feeds given dogs, manufacturers are very conservative and seldom bring the fat level above ten per cent. This seems wise because the table scraps given most dogs in the homes are unusually rich in fat. If the daily ingestion of fat by a dog is too high, it will not get enough minerals, protein or vitamins unless the basal feed is rich in these essentials. Kennels that seldom feed table scraps often augment dog feeds of the dry type with lard or tallow. Dogs are especially fond of lard and such additions prove useful in fattening dogs that are too thin. The condition of the hair coat often improves after the feeding of a soft fat such as kettle rendered lard to dogs.

For many years rodent and dog feeds have contained some estrogens that occur naturally in plant products such as alfalfa. One of the newer of these is COUMESTROL, related to coumarin. One part per thousand of this in the diet of mice will prevent reproduction.

Alfalfa is usually added in small amounts in dog feeds to provide some carotene and vitamin K. Dogs do not like dried alfalfa.

The better quality dog feeds have adequate sources of vitamins for the growth of puppies. The cheapest ones may lack such products as yeast and wheat germ because they may be composed largely of returned bread or waste cookies sold as cooky meal.

Dog feeds of every type are usually adequate in inorganic constituents such as calcium because they are supplemented with bone meal. Many dogs are also given bones even when puppies. Bones even contribute protein to the diet of dogs. If bones have not been heated they can be used to maintain dogs for long periods of time.

Unidentified growth factors may be needed by puppies but it seems more likely that the ratios of various vitamins may be important. Some special products such as distillers solubles which contain numerous by-products from fermentation seem to accelerate the growth of puppies. No one knows whether this effect is due to a better balance of essentials or to increased level of some recognized essential.

Dog feeds not only contain common products such as dried yeast and wheat germ but also contain one unique product that contains both fat soluble and water soluble vitamins. This is tomato pomace, the dried residue that remains after squeezing the juice from tomatoes. This product has the power of regulating the composition of the excreta of dogs so that they suffer from neither constipation nor diarrhea. No one knows the constituent responsible for this action. The product is rich in pectin but this is not the essential because other products rich in pectin such as dried apple pomace are not very useful.

Dogs seem to require the same vitamins and essential amino acids as man with a few exceptions. Under most conditions the dog seems to

be able to make the vitamin C it requires within its own body.

Little has been done to determine the role of vitamin B_{12} in the economy of the dog. Beagle puppies have been reared upon vegetarian diets with the protein provided largely by soy meal without any evidence of deficiency. Such diets produce symptoms of deficiency in rats. Such dogs attain adult size without difficulty but few of them reproduce. It is possible that these puppies had stored sufficient vitamin B_{12} during the nursing period to last until the end of the growth period. In future experiments it may be necessary to place the mother dogs upon deficient diets at the time of conception or earlier. Most dry dog feeds sold as meal or pellets contain a mixture of proteins derived first from meat scraps and secondly from soy products, yeast and cereals. Small amounts of protein come from the minor ingredients of dry dog feeds such as cheese meal, dry skim milk, dry whey, wheat germ, dry yeast and alfalfa.

The protein needs of dogs of various ages have been studied for more than a century. Under most conditions fifteen per cent of the calories in the form of high quality protein seems adequate. There is no evidence that a dog needs more than twenty per cent even during lactation when as much as one third of the ingested nitrogen may be secreted in the milk. Most dog feeds contain more than twenty per cent of protein but this value is an analytical figure for nitrogen. If a dog is fed supplements such as table scraps that are rich in fat, the value for percentage of the calories may be lower than fifteen.

In past times a protein deficiency has resulted from some basic mistakes in feeding diets rich in fat to dogs because values of canned feed were estimated upon a wet basis. Since canned feeds may contain seventy-five per cent of water, if such feeds contain ten per cent of fat, the real value for the fat percentage upon a dry basis becomes forty. All feeds might best be calculated to a dry basis before they are used in research.

In modern times the greatest change in the protein and taste appeal of dog feeds has been due to the disappearance of most of the horses. This has meant an increased use of proteins of plants and by-products such as the lungs and udders of cows. Although these contain much fibrous tissue they are quite well digested and absorbed by the dogs. Even the protein materials from the stomachs and intestines of animals such as the horse are well digested and absorbed by the dog. However, these are deficient in methionine and possibly other essential amino acids. It appears that the muscles that serve the intestines and stomach should have a different amino acids composition from those that serve the rest of the body.

The ability of the dog to utilize the proteins of bones has been known for more than a century. The protein of raw bones is much better utilized than that of dried bones as one may feed in bone meal. The protein of bones like that of the intestinal muscles is also lacking in methionine. About half of the protein of the fresh bone is digested and absorbed. The dry matter of bones contains 28 per cent of protein so bones may afford substantial contributions to the diet of the dog. Furthermore, the inorganic constituents of bone have been recognized for centuries for their ability to prevent diarrhea in dogs. The white excreta of bone eating dogs may even lead to constipation. A half century ago it was common for researchers to feed dogs high levels of bone ash in running nutrition studies.

The raw or cooked intestines of animals contain 8 to 10 per cent of protein. The wall of the stomach contains 11 to 12 per cent while lean muscle meat contains 18 per cent. The large intestines of animals may be rich in fat and this needs to be taken into account if comparisons are made with lean muscle meat or even the walls of the stomach.

Dry yeast may be used to supply part of the protein of the feeds of dogs. Torula yeast has been fed at varying levels to dogs up to a maximum of 28 per cent of the dry matter of the diet. Dogs do not relish such high levels of this yeast but can be kept in nitrogen balance with the yeast providing the sole source of protein. Under such conditions dogs digest and absorb 80 per cent of the protein. This contrasts with the digestion and absorption of 92 per cent of the protein of the muscle meat of horses. When a mixture of muscle meat and dry Torula yeast is fed to dogs the assimilation of the protein is intermediate.

Torula yeast was formerly condemned as feed for animals because high levels produced liver necrosis in rats. Since this condition seems to have been produced by the deficiency of traces of selenium in Torula yeast, this objection to Torula yeast as a feed seems to have been overcome. However, no one described any pathological conditions from feeding dry yeast of any kind to dogs. Torula yeast seems well tolerated by puppies when used at a five per cent level of a conventional canned dog feed containing 65 per cent moisture. In this case the level of the yeast would be about 15 per cent if calculated to a dry basis.

Dogs seem to require the same inorganic elements as man and the rat. Before the use of iodized salt became common, goiter was frequently observed among dogs in the same areas in which man was afflicted. Now it is a rare disease.

The diet of dogs has long been kept low in sodium chloride. Most dog feeds include less than half per cent. No one has ever shown that man needs more than this and the modern trend is to reduce the human consumption of salt. Since dogs do not lose salt because they do not perspire, this may be the chief reason that men consume more than dogs. However, human food habits are most likely to account for the higher level of salt consumption by man.

Old dogs suffer from losses of the inorganic substances of bone as do men and other animals. Most old dogs can be maintained in calcium balance if the diet contains 0.3 per cent of calcium or more. Thus, a twenty pound dog seems to need as much calcium or even more than an average man.

Most dog feeds are rich in bone and provide more than 1.0 per cent of calcium. Although such diets are rich in bone and, therefore, high in fluoride since most bone has more than 500 ppm of this element, the teeth of few dogs show mottling. This is probably due to the poor absorption of fluoride from bone since the teeth of dogs will exhibit mottling from feeding lower levels of fluoride as the sodium salt.

Dogs seem to differ from white rats in respect to the production of bone tumors from the feeding of radioactive Ca^{45} to puppies. At moderate levels of calcium in the diet such as one half per cent both rats and puppies may utilize more than 50 per cent of it. If rats and puppies are fed similar levels of Ca^{45} for the two week periods after weaning and if the levels are given in proportion to body weight, the rat will develop a bone tumor and perish when about half through life. In contrast the dog develops bones that fracture easily but then recovers and develops no bone tumors at least as long as the study lasted which was five years.

Fads in feeding . . .

One definition of a fad given by the dictionary is "a matter of no importance or an important matter imperfectly understood, taken up and urged with more zeal than sense." The most common fad among dog owners is to attempt to feed diets without starch. The dog utilizes all starch including cooked potatoes just as well as his master. Many believe that dogs cannot have sound teeth if fed soft diets. Puppies reared upon soft, meal type diets usually have perfect teeth. Bones are often kept from dogs for fear that a splinter may lodge in the esophagus as the dog swallows. This does happen occasionally but it is rare. Some dog owners feed their pets the bones of chickens and turkeys. This should not be done in the case of puppies since they eat too rapidly.

Handling dogs . . .

Substantial advances have been made in recent years in the construction of improved quarters for dogs. Breeding dogs and even those used for research can be kept outdoors in pens that can be moved and in pens that provide expanded metal bottoms so that the dog does not acquire parasites from the soil. Many modern laboratories provide excellent quarters for dogs because they have learned that the dogs remain in better health and, therefore, a higher quality of man is willing to care for the dogs. The old dark, damp, parasite ridden quarters of dogs are disappearing from the modern research laboratories of both universities and institutes. Stainless steel dishes and other equipment make modern sanitation possible.

Many laboratories are now using pure bred registered dogs for the research. Uniformity makes it possible to employ few dogs for the same research results.

Many dog food manufacturers are establishing dog research facilities for the determination of the proper nutritional requirements and maintenance of health. There is still much to be determined on the nutritional requirements of the canine but, in general, the commercially prepared diets for dogs are in better nutritional balance than most diets enjoyed by man.

TEST FEED STABILITY—Feeds and its added ingredients are constantly under test by Chas. Pfizer scientists at their Agricultural Research Center, near Terre Haute, Indiana. Here William C. Sherman, head, nutrition department, listens to a successful report by G. O. Kuhn, chemist, on the storing qualities of an experimental feed. William H. Hale, nutrition researcher, has been testing the feed for animal response.

For additional copies of this article, write to Chas. Pfizer & Co., Inc., AGRAData, Agricultural Research & Development Department, Terre Haute, Ind.

These men did the work . . .

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Study of Feed, Farm Supply Business Failures in 1958

'It is clear that the basic problem of failure is lack of management experience and ability.'

By James J. Etro
Dun & Bradstreet, Inc.

During 1958, 42 retailers of feed and farm supplies failed with liabilities of $2,328,000 and three manufacturers of prepared feeds for animals and poultry failed with liabilities of $118,000, according to a recent study of the business economics department of Dun & Bradstreet, Inc., New York. Here are how the individual lines fared:

Retailers of Feed and Farm Supplies—Although the number of failures among retailers of feed and farm supplies was down 13% in 1958 (42 failures in 1958 vs. 48 failures in 1957), resultant liabilities from these failures soared from $1,572,000 in 1957 to $2,328,000 in 1958—an increase of 48%. The 42 failures reported in 1958 were the second highest annual number of failures reported since failure statistics were first prepared on the line in 1940—topped only by the 48 failures reported in 1957.

Liabilities of $2,328,000 in 1958 represented a new record high for creditors' losses—topping the previous annual high of $2,146,000 reported in 1952. The average liability for each retailer of feed and seed supplies that failed in 1958 was $55,429—an increase of 69% compared to 1957's average liability per failure of $32,750.

The failure statistics for the first five months of 1959 would seem to indicate that the failure trend for the line is now downward. In the first five months of 1959, 15 retailers of feed and farm supplies have failed with liabilities of $404,000 as compared to 18 failures with liabilities of $1,419,000 in the corresponding period of the previous year.

TABLE 1. Causes of Business Failures

Underlying causes	No.	%	Apparent causes	No.	%
Neglect	508	3.4	Poor health	286	1.9
			Bad habits	125	0.8
			Marital difficulties	52	0.4
			Other	45	0.3
Fraud	313	2.1	Irregular disposal of assets	192	1.3
			False financial statement	53	0.4
			Premeditated overbuy	23	0.1
			Misleading name	4	0.0
			Other	41	0.3
Disaster	187	1.3	Fire	93	0.6
			Flood	21	0.1
			Employees' fraud	9	0.1
			Strike	7	0.1
			Burglary	6	0.1
			Other	51	0.3
Reason Unknown	184	1.2			

Manufacturers of Prepared Feeds for Animals and Poultry—A much brighter picture appears in the failure statistics of 1958 for this line. Failures of manufacturers of prepared feeds for animals and poultry in 1958 were down to three failures from the eleven failures reported in 1957 and resultant liabilities were down from $918,000 in 1957 to $118,000 in 1958. However, during the first five months of 1959, three manufacturers of prepared feeds for animals and poultry have failed with liabilities of $850,000 as compared to two failures with resultant liabilities of $115,000 in the corresponding period of the previous year.

It should be pointed out that the above failure figures include only businesses that failed with losses to creditors. Not counted as commercial failures are those who liquidated voluntarily and paid whatever obligations were outstanding at the time they closed their doors. Therefore, the failures discussed above are not necessarily the only businesses in these lines that ceased operations in 1958—but they were the ones who did so at the expense of someone else.

In its studies of the causes of failure, Dun & Bradstreet tries to get at the basic cause of each failure. To ascertain why the business failed, the Dun & Bradstreet reporter makes a final investigation of the account when the failure is reported. During this final investigation, the reporter will interview, whenever possible, a principal of the business. In addition, investigations are made with banks, suppliers and other outside sources to help form an objective opinion as to the failure cause.

There are, of course, certain hazards and limitations in summarizing all the complex factors which cause a business to fail. However, when you add up the results of these investigations, a definite pattern emerges and is well worth studying.

The number of retailers of feed and farm supplies and manufacturers of prepared feeds for animals and poultry that failed in 1958 is too small in number of break down separately as to the cause of failure, but the study of the causes of failures among all businesses will indicate danger signals that these lines could use to check their operations. Table 1 shows data from the study of causes of failures that Dun & Bradstreet, Inc., did on the 14,964 business failures, reported for the year 1958.

Figures in Table 1, however, account for only 8% or 1,192 of the 14,964 total business failures in the U.S. in 1958. Undoubtedly, some of these failures were caused by circumstances beyond human control or "acts of God," however, some of them could have been provided against by proper insurance.

Dun & Bradstreet tried to get the

Classification of Causes of Business Failures in U.S., 1958

(Based on Opinions of Informed Creditors and Information in Dun & Bradstreet's Credit Reports)

Line of business—All No.	%	Underlying causes	Method of operation—All	Apparent causes	No.	%
508	3.4	Neglect:	Due to	Bad habits	125	0.8
				Poor health	286	1.9
				Marital difficulties	52	0.4
				Other	45	0.3
313	2.1	Fraud:	On the part of the principals, reflected by	Misleading name	4	0.0
				False financial statement	53	0.4
				Premeditated overbuy	23	0.1
				Irregular disposal of assets	192	1.3
				Other	41	0.3
1846	12.3	Lack of experience in the line	Evidenced by inability to avoid conditions which resulted in:	Inadequate sales	7817	52.2
2545	17.0	Lack of managerial experience		Heavy operating expenses	784	5.2
2780	18.6	Unbalanced experience*		Receivables difficulties	1597	10.7
6601	44.1	Incompetence		Inventory difficulties	1219	8.1
				Excessive fixed assets	1121	7.5
				Poor location	400	2.7
				Competitive weakness	3162	21.1
				Other	642	4.3
187	1.3	Disaster:	Some of these occurrences could have been provided against through insurance.	Fire	93	0.6
				Flood	21	0.1
				Burglary	6	0.1
				Employees' fraud	9	0.1
				Strike	7	0.1
				Other	51	0.3
184	1.2	Reason unknown				
14964	100.0	Total		Because some failures are attributed to a combination of apparent causes, the totals of these columns exceed the totals of the corresponding columns on the left.		

*Experience not well rounded in sales, finance, purchasing and production on the part of an individual in case of a proprietorship or of two or more partners or officers constituting a management unit.

TABLE 2. Causes of Other Failures

	Number	%
Incompetence	6,601	44.1
Unbalanced experience	2,780	18.6
Lack of managerial experience	2,545	17.0
Lack of experience in the line	1,846	12.3

TABLE 3. Further Analysis of Failures

	Number	%
Inadequate sales	7,817	52.2
Competitive weakness	3,162	21.1
Receivables difficulties	1,597	10.7
Inventory difficulties	1,219	8.1
Excessive fixed assets	1,121	7.5
Heavy operating expenses	784	5.2
Poor location	400	2.7
Other	642	4.3

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TABLE 4. Failures of Retailers of Feed and Farm Supplies

(1940-58)

Year	Number	Liabilities
1940	35	$ 350,000
1941	35	324,000
1942	31	262,000
1943	8	143,000
1944	2	15,000
1945	3	84,000
1946	3	33,000
1947	9	116,000
1948	9	214,000
1949	27	753,000
1950	34	485,000
1951	27	566,000
1952	32	2,146,000
1953	31	1,004,000
1954	34	926,000
1955	42	1,359,000
1956	31	634,000
1957	48	1,572,000
1958	42	2,328,000

Source: Business Economics Department, Dun & Bradstreet, Inc.

This record includes those businesses that ceased operations following assignment or bankruptcy; ceased with loss to creditors after such actions as execution, foreclosure, or attachment; voluntarily withdrew leaving unpaid obligations; were involved in court actions such as receivership, reorganization or arrangement; or voluntarily compromised with creditors.

TABLE 5. Failures of Manufacturers of Prepared Feeds for Animals and Poultry

(1941-58)

Year	Number	Liabilities
1941	3	$ 63,000
1942	3	114,000
1943	3	46,000
1944	..	.....
1945	..	.....
1946	2	148,000
1947	1	700,000
1948	7	492,000
1949	11	526,000
1950	3	163,000
1951	2	45,000
1952	3	656,000
1953	4	333,000
1954	8	320,000
1955	4	1,281,000
1956	8	649,000
1957	11	918,000
1958	3	118,000

Source: Business Economics Department, Dun & Bradstreet, Inc.

This record includes those businesses that ceased operations following assignment or bankruptcy; ceased with loss to creditors after such actions as execution, foreclosure or attachment; voluntarily withdrew leaving unpaid obligations; were involved in court actions such as receivership, reorganization or arrangement; or voluntarily compromised with creditors.

real cause behind the other 13,772 or more than 9 out of 10 failures, which could not be explained by obvious, outside circumstances. Table 2 shows the way the figures fell.

The bulk of the failures in 1958 were management failures. This group of 13,772 failures was further analyzed (Table 3) by the surface causes, or the reasons given as excuses, for failure.

Because some failures in this analysis were attributed to a combination of apparent causes, the figures add up to slightly more than the 92% of the failures analyzed.

As we study the situation, it is clear that the basic problem of failure is one of lack of management experience and ability. It goes without saying that a successful business does not just happen—it is the result of deliberately calculated and carefully followed policies.

Businesses will not run themselves —they are merely reflections of the capabilities of the men behind them. A success doesn't just happen — neither does a failure. The basic consideration in the success or failure of a business is the owner's ability, on a continuing year after year basis, to make wise decisions compatible with the economic times, to buy wisely, to sell only as much as he can afford to sell and his own ability to grow with the business.

NEW DAUGHTER

ATHENS, GA. — Henry Massey, poultry specialist with the state extension service, and Mrs. Massey are the parents of a daughter named Julie. They already have two sons, Milton and Dewey.

Accident Record

ST. JOSEPH, MO. — A perfect no lost time accident record for the past four years has been accomplished by the following list of men of the maintenance department of the Dannen Mills plant, St. Joseph: Clarence Keck, Ray Waldo, Curley Bywaters, Maurice Watson, Don Golden, Earl Baker, Paul Marshall, K. L. Word, Al Brown, Foster Lane, Al Cross, Elmer Sigears, Jim Nichols, Galen Marshall, Harvey Kenney, Wilbur Zey and John Miester.

To Build Feed Mill

WEST UNION, IOWA — Harry Cline, manager of the West Union Co-op Co., has announced a contract has been awarded to Mid-States Construction Co., Omaha, for construction of a new feed mill. The mill will contain 25 bins, one driveway and a warehouse, with push button equipment throughout.

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Results of Livestock Feeding Tests Reported by Oklahoma Researchers

STILLWATER, OKLA. — Several livestock feeding research reports were released recently by the Oklahoma agricultural experiment station. The reports summarize research findings concerning sheep, swine and beef cattle feeding tests by Oklahoma State University scientists.

Summaries of some of the reports are as follows:

Comparison of Iron Injections Under Different Types of Management Systems; I. T. Omtvedt, J. A. Whatley, Jr., J. B. Palmer and D. F. Stephens—Two trials, including 56 litters (467 pigs) from five different lines of breeding, were conducted to study the effects of iron injections under various types of management systems.

The addition of iron resulted in heavier pigs at weaning and a higher survival rate to weaning. Results indicated that pigs injected with 100 mg. of iron dextran weighed more at weaning and had a lower death loss than those injected with iron-cobalt-folic acid which contained only five mg. of elemental iron, or those receiving no injection.

Iron dextran had its largest effects on pigs raised on concrete in confinement without additional iron supplement. It was noted that the addition of iron in the water of the baby pig waterer or fresh dirt in the pen tended to increase the average weaning weight and the percentage survival for pigs raised in confinement.

A Comparison of Pasture and Confinement Systems for Raising Hogs; J. A. Whatley, Jr., I. T. Omtvedt, J. B. Palmer and D. F. Stephens—Sows raising litters on pasture weaned heavier pigs and heavier litters at 56 days than those raising litters on concrete floors in confinement. This difference was greatly reduced if adequate anemia preventive treatment by iron-dextran injections were used for the confinement pigs.

After weaning, confinement fed pigs gained faster and more efficiently, although there was a tendency for them to be slightly fatter and not as straight and sound on their feet and legs as the pasture fed pigs.

The best combination system in this experiment was the pasture-confinement system in which the litters were raised by their dams on pasture from 6 days of age until weaning at 56 days of age. Then the pigs were moved to confinement lots for feeding to a market weight of 210 lb. Pigs on this pasture-confinement system gained 1.62 lb. per day with a feed requirement per pound of gain of 3.29 lb. The poorest system was the confinement-pasture system in which the pigs gained 1.32 lb. per day and required 3.55 lb. of feed per lb. of gain.

Stilbestrol and an Antibiotic (Erythromycin) for Suckling Beef Calves; A.B. Nelson, L. S. Pope, E. J. Turman, and R. Totusek—The value of 12 mg. stilbestrol implants has been studied in three additional trials with suckling steer calves and two additional trials with heifer calves. At Lake Blackwell, the stilbestrol implant increased summer gains of spring-dropped calves 14 lb. and heifer calves 23 lb. in a 112-day period. In the subsequent wintering period, there was no adverse effect on gains of calves due to previous summer implant.

With spring calves at Ft. Reno, stilbestrol implants decreased the gains of steer calves by 1 lb., but increased the gains of heifer calves by 41 lb. The gain of fall-dropped steer calves at Lake Blackwell was increased 27 lb. by the stilbestrol implant. There were no noticeable side effects in any of the steers in these three trials. However, noticeable side effects were apparent in some of the heifers.

In 8 trials conducted at the Oklahoma agricultural experiment station, the average increase in gain of steer calves due to stilbestrol implants is 22 lb. The average increased gain in 5 tests with heifers is 36 lb. Noticeable side effects sometimes develop in implanted calves. These effects are apparently related to size of the implant and sex of the calf.

In trials when suckling calves were implanted with 12 mg. of stilbestrol in May and an additional 12 mg. in August, there was increased teat length and a slightly raised tailhead of some of the steers and heifers and a swelling of the vulva of some of the heifers. When implanted only in early summer, there have been no side effects observed with steers, although a swelling of the vulva of some of the heifers has been noted. At the end of a subsequent fattening period in dry-lot these side effects were no longer apparent. At weaning the stilbestrol-implanted calves were given a slightly higher feeder grade.

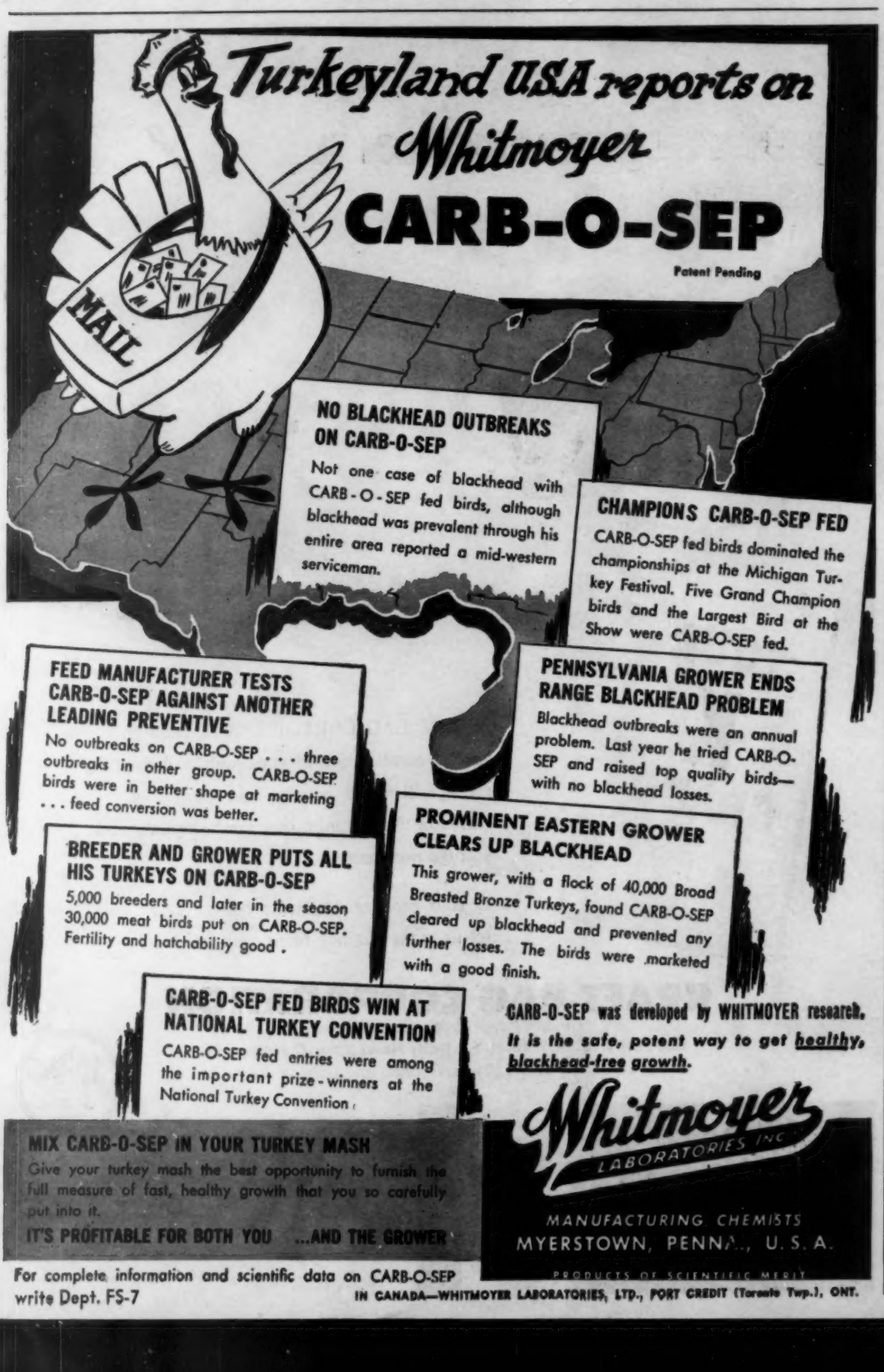
Apparently the subsequent performance of stilbestrol-implanted calves is not adversely affected. In three trials, the subsequent feedlot gain of previously implanted calves has been an average of 9 lb. greater than for calves not implanted in the previous summer.

In wintering trials, the increased gain of previously implanted calves during the subsequent period has been an average of 6 lb. in 3 trials. Data from these 6 trials would indicate that implanting suckling calves with stilbestrol does not have any adverse effect on subsequent performance either in the feedlot or when fed wintering rations.

The inclusion of stilbestrol or stilbestrol plus erythromycin in a creep-fed mixture did not increase gains of spring calves in the current test. However, in earlier tests at Ft. Reno, including stilbestrol in the creep-feed of fall calves increased gains. Erythromycin increased the gains of fall calves only 9 lb.

Aureomycin Studies with Fattening Lambs in Dry Lot; Robert L. Noble, Kenneth Urban, Richard Pittman and George Waller, Jr.—This report concerns the effects of Aureomycin on rate of gain and feed efficiency when used as a feed ingredient, mixed with the salt, or added to the water.

Sixty grade Western feeder lambs were used in this experiment. These lambs were the heavy end of the 600 lambs purchased. The average initial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weight after shearing was from 88 to 90 lb.

The treatments used were as follows (15 lambs per lot):

Lot 1. Basal ration — 45% milo, 5% molasses, 50% alfalfa hay, ground and mixed.

Lot 2. Basal plus 20 grams of Aureomycin per ton of feed; to supply approximately 30 mg. of Aureomycin per lamb per day.

Lot 3. Basal ration plus Aureomycin in salt; (3 lb. of Aurofac 10 mixed with 37 lb. of salt) to supply approximately 30 mg. of Aureomycin per lamb daily.

Lot 4. Basal ration plus soluble Aureomycin in water; to supply approximately 30 mg. per day.

All lambs were implanted with a 6 mg. stilbestrol implant; salt was available to the lambs of all lots.

Individual weights following an overnight period without access to feed and water were taken at the beginning and at the end of the trial. The lambs were sold on the Oklahoma City Market.

Aureomycin as a feed ingredient increased average daily gain by .1 lb., and with Aureomycin in salt the increase was .17 lb. The addition of soluble Aureomycin to the drinking water did not improve gains.

The feed required per cwt. gain was high for all lots—perhaps due to the heavy initial weight. However, Aureomycin increased feed efficiency in each case. The response was the greatest when Aureomycin was added to the salt or mixed with the food.

All lots of lambs lost from $6-7 per head due to negative margin of 5½¢ per lb.

Comparison of Two Methods of Preparing Barley for Fattening Steer Calves; Kenneth Urban, L. S. Pope and Dwight Stephens—Results of a feeding trial still in progress, comparing crimped (steam rolled) to finely ground and pelleted barley for fattening beef calves indicate that fine grinding and pelleting of this grain reduces feed intake and rate of gain. An increase was observed in the amount of grain required and feed cost per cwt. gain.

Growing and Finishing Hogs with Free-Choice vs. Complete Rations; Pelleted vs. Meal Ration; Ground vs. Whole Milo; J. C. Hillier and J. J. Martin—In these trials, complete mixed rations produced slightly faster and more efficient gain at lower cost than free-choice feeding.

Pelleting the complete mixed ration did not improve efficiency or reduce feed cost. The pelleted supplement appeared to be slightly superior to the meal form in terms of rate of gain, feed efficiency, and feed cost per unit of gain. Differences were very small. Pelleting ground milo reduced rate of gain and increased feed cost.

Grinding milo moderately fine improved rate of gain and efficiency and reduced the feed cost per unit of gain.

Effects of Feeding or Injecting Certain Tranquilizers on Beef Cattle Performance, and Residues in the Carcass; R. L. Hendrickson, A. B. Nelson, W. J. Costello, Kenneth Urban, L. S. Pope, G. V. Odell and H. W. Reuber—There was a wide variation between animals in the degree of tranquilization obtained from a given dose. A practical dose may be adequate to make one animal docile, while another animal of equal age and weight may show very little evidence of sedation.

When weaning calves were given intramuscular injections of Diquel or SKF5354A only about one-half of the injected calves demonstrated clinical tranquilization, and this lasted less than 48 hours. A dosage of 0.9 to 1 mg. of Diquel per lb. of body weight resulted in greater tranquilization than a dosage of 0.7 mg. per lb. There was no relationship, however, between the tranquilizer injected and weight gains of calves at weaning or the 21 to 33 day period following weaning.

The addition of Compazine to the feed of yearling steers did not improve the rate of gain, feed efficiency, or carcass merit of the animal used in these trials.

Small quantities of residual chlorpromazine were found in the fat, brain, heart, lung, and kidney of beef animals injected with the drug. Animals held for 72 hours after injection had no residual compound in any of the tissues. The lean muscle contained no residue regardless of the dose level.

From the results of these experiments, it is questionable whether tranquilizers have as much potential for increasing profits in meat animals as one would gather from advertisements. Undoubtedly tranquilizers are of great value in selected situations. More studies are needed before such situations can be precisely defined.

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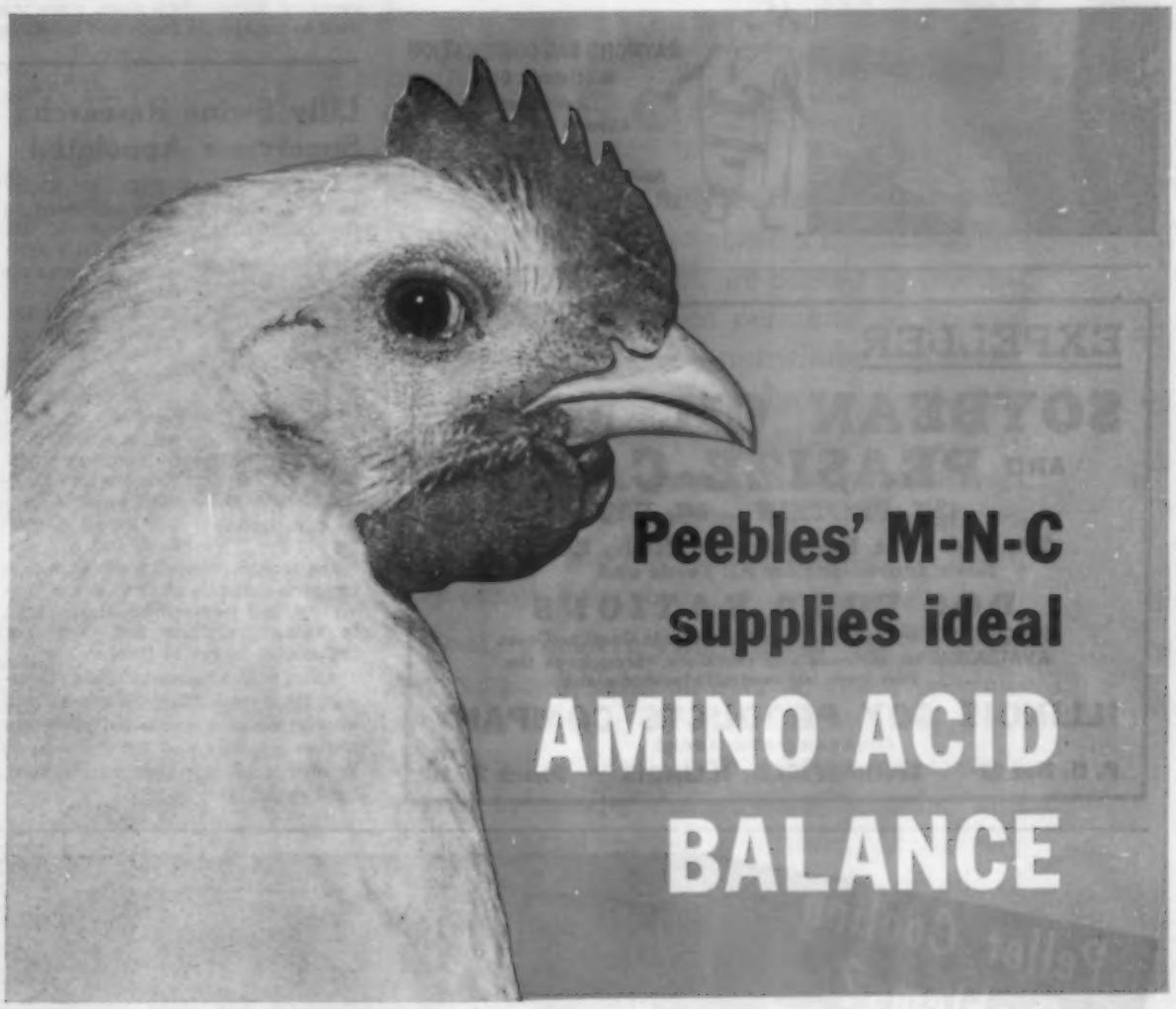

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Note General Decline in Egg Demand

WASHINGTON—Per capita egg production in 1959 is expected to be above the 1958 average, but even with the low egg prices this year, there won't be much of an increase. In general, there has been a declining demand for eggs, and an apparent failure to respond to low prices has been a cause of concern to both the feed and poultry industries.

This situation is noted in the U.S. Department of Agriculture's latest report on the poultry and egg outlook.

Consumption of shell eggs per person from late 1958 through April was below a year earlier, despite lower prices. In May, for the first time in six months, per capita egg consumption was larger than the same period 12 months before. Retail egg prices have been below a year earlier in every month of this year, even recently when prices climbed.

Average per capita egg consumption in 1959 is likely to be about 353 eggs —only slightly above last year's total of 349 (323 shell eggs and the equivalent of 26 in processed form). The increase will reflect larger production and lower prices and promotion efforts. Most of the increase will take place the last half of the year. In most months of a January-June period, egg consumption is already so high that consumer response to price changes is very small.

USDA said that the failure of egg consumption to respond well to price declines indicates a declining demand as well as an inelastic demand. The interaction between prices and per capita use is complicated, however, by a possible lag in adjustment of purchases to lower retail prices.

The declining demand is indicated, USDA said, by the general downtrend of egg prices the past 10 years in spite of smaller per capita supplies. Just as consumption doesn't increase much when prices drop, it is also noted consumption doesn't drop much when prices rise. Part of this problem is attributed to changes in foods and habits in eating breakfast.

Lilly Swine Research Supervisor Appointed

INDIANAPOLIS, IND.—Dr. Charles E. Jordan has been appointed to the animal nutrition staff of Eli Lilly & Co.'s agricultural research division.

C. E. Jordan

According to Dr. J. F. Downing, director of Lilly agricultural research, Dr. Jordan will supervise swine nutrition research at the company's new 500-acre agricultural research center near Greenfield, Ind.

Dr. Jordan received his B.A. degree in animal science at Ohio State University, and received his M.A. degree in animal nutrition and doctor of philosophy degree at Purdue.

Along with advanced studies at Purdue, Dr. Jordan taught livestock production courses, conducted swine nutrition research and for a time was in charge of the University's purebred swine unit.

Karl L. Juve

Mylan E. Ross

Karl Juve Retires From National Food

FOND DU LAC, WIS.—Karl L. Juve has retired from his position as president and general manager of the National Food Co., Fond du Lac, after 36 years in feed selling and manufacturing. He will continue to retain an interest in the firm as a stockholder, director and consultant.

In announcing his retirement, Mr. Juve also announced the appointment of Mylan E. Ross as general manager of the company.

Mr. Ross comes to National Food from the Pillsbury Co., where he was a member of the sales and marketing staff of the feed division at Clinton, Iowa. He has a broad background in the animal feed business, was a university instructor in marketing and selling for four years at Washington State College, and also lectured at Drake University, Des Moines.

He is a member of the marketing research committee of the American Feed Manufacturers Assn.

He received his B. S. degree in agriculture from the University of Nebraska, and his master's degree from the University of Chicago.

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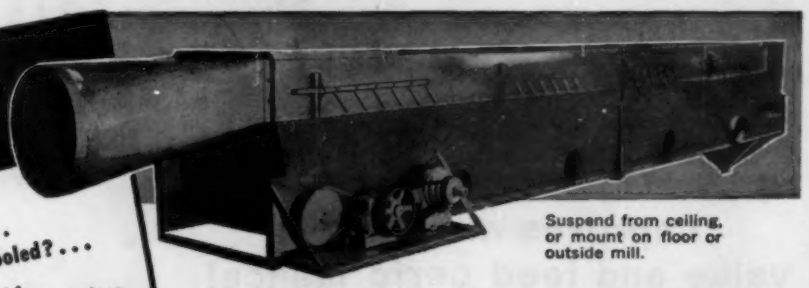
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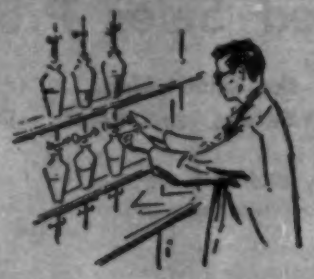

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Poultry Serviceman Describes Role in Feed Sales Program

'Don't overlook the small things . . . Service satisfies customers and helps sell feed.'

By Charles L. Stratton
Feedstuffs Special Writer

Whether servicing feed dealers or individual poultrymen, take a tip from John A. McCoy, one of the two poultry service representatives of the H. K. Webster Co., Lawrence, Mass. (Blue Seal Feeds), who says, "It's the little things that count in this business."

"What about your deliveryman?" he asks. "Is he a surly, gruff character that will cause you trouble? Some dealers don't even see their customers and the deliveryman is their customer contact. He sees what's going on. He can either be an asset or a liability."

He points out that a feed deliveryman who is on the ball will keep his eyes open when on a customer's farm. For example, if he sees a brooder house cleaned and ready for baby chicks, he'll say, "See you're going to start baby chicks. When do you want your starter feed delivered?" Maybe the customer never gave starter feed a thought.

If the customer has a gripe, does your deliveryman cause trouble or does he take it back to the boss so it can be handled carefully and to full customer satisfaction? Is he careful not to dent a building when unloading feed? In case of damage does he neglect to report it to the office so it can be repaired?

"We always recommend that our dealers hire conscientious drivers," Mr. McCoy says. "Select men with a pleasing personality that can get along with customers.

"When dealing with producers," he continues, "I find their biggest problem is letting little things slip. They live with their birds and don't notice things that we see in going from farm to farm. If a producer will watch these little things he will be money ahead. We also pass along time and money saving short cuts we see on various farms. Anything to save the producer a few minutes a day."

Little Things Overlooked

He points out one of the "little things" frequently overlooked is electric lights in the laying house, especially in the spring. "Maybe they set the lights by time clock to operate from 4 to 6:30 a.m.," he explains. "When the sun comes up earlier they forget to shut the lights off earlier, say at 5 a.m. As days grow lighter earlier, birds can see, move around, feed and drink at that hour without lights."

He says this 1½ hours of lighting a poultryman can save by properly adjusting his time clock doesn't amount to much for a single electric light bulb. But with 5,000 layers the pennies saved daily will multiply by the month.

Another important pointer from this poultry serviceman is: "We sell feed, but we don't like to see it wasted." Although he prefers floor-type feed hoppers ("don't over-fill"),

CLEARING HOUSE—The main office of H. K. Webster Co., Lawrence, Mass., serves as a clearing house for John A. McCoy (pictured), one of the company's two poultry service representatives who is on the road visiting dealers and their customers Monday through Friday each week. He is on emergency call 24 hours a day seven days a week. In an emergency, the office can generally locate him anywhere within 2-4 hours—and within 6 hours he can reach any farm in his territory.

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JIFFY KIT—Poultry servicemen of the H. K. Webster Co. use jiffy kit displayed by John A. McCoy who made holder-cover out of upholstery material. He snaps kit up on wall of car trunk. He can pull it out, roll it up and carry it when visiting farms with a dealer.

FRONT COUNTER — John McCoy (left) and James Irving of the H. K. Webster Co. check over service manuals placed on front counter of store where customers will see them and pick them up.

the thing he likes about hanging feeders is the litter is kept out of the feed.

Mechanical poultry feeders? He isn't against them, but asks, "If you are in trouble can you tell me the amount of feed consumed in each pen?"

The amount of feed consumed is the first question he asks when a producer has flock problems. A mechanical feeder may take care of five pens and the consumption can be averaged, but what about the difference in feed consumption between each pen?

Faced with a health problem in only one pen the feeder track can be covered and medicated feed placed in ordinary feed hoppers. This actually happened in one case of synovitis in a five-pen house where the fourth pen only was infected. Medicated feeds were used in the single pen and the disease did not spread to the other birds.

24-Hour Service

Although Mr. McCoy, who shares the poultry service department with Ronald Sherburne, is on duty 24 hours a day 7 days a week for emergency service calls, his normal routine is to leave the main office on Monday and cover his territory in western New England and part of New York state, visiting dealers and customers. He calls the office Wednesday and Friday mornings, returning home late Friday.

"In an emergency a dealer or producer calls the main office in Lawrence. There is a diary in the office," he says, "and I can generally be located within two to four hours. Within six hours I can be at any farm within my territory."

He notes that much better service is obtained by using the main office as a clearing house for all incoming emergency calls. "If they called my home," he adds, "my wife wouldn't know where I was and I wouldn't get the message until Friday night."

He claims that customer service is very important and that "a poultryman's business is our business." Take a call he received last year. A turkey producer was losing three day-old poults that had cost him $1 apiece.

"You just can't tell the customer you'll be there the day after tomorrow," Mr. McCoy says.

In checking with the producer over the phone, it appeared to be a blood disease. So Mr. McCoy drove immediately to the farm, arriving at 10:30 that evening. The trouble turned out to be a management problem and after he pointed out how to correct the situation, he left a very happy customer.

Emergency Procedure

Here's the procedure Mr. McCoy follows as soon as he gets an emergency call, whether he's in the office, at home or on the road:

If the trouble can't be taken care of simply over the phone he tells the grower, "I'm on my way."

Arriving at the farm, he checks: (1) Amount of feed consumption, (2) mortality (How frequent? When did it start? Mortality last day or strung out over a week?) and (3) egg production, layers, and record keeping. He emphasizes the importance of records. "We give out free record charts," he says, "but many producers fail to keep accurate records. I can get a lot of valuable information from records. I look up the number of eggs

WATCHING PROCESS—John A. McCoy (right) watches a testing for crude fiber in the H. K. Webster Co. lab at Lawrence, Mass., with Harold E. McClure, head chemist. This is only a partial view of the lab which uses other methods of quality control.

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laid per day, number of birds culled or lost by death, and pounds of feed consumed on a daily basis. I check the current month, then compare with the previous month to tell how the flock is doing. That is, if the records are complete.

"I talk with the producer," he continues, "and learn what he has observed to get a good overall picture. Then I look the flock over myself."

Mr. McCoy doesn't just stick his head in the door, but takes time to examine the birds thoroughly, spending 4-5 hours to a whole day on the one service call if necessary. When he goes into an infected pen he looks around, and if he sees suspicious birds he may kill two or three and examine them. If it is an ordinary problem, he prescribes immediately, but if there is any question, he immediately takes several specimens to the nearest college laboratory. He stays and watches the post-mortem in order to add to his knowledge and talk the problem over with the college pathologist. Time is no object and he doesn't quit until the producer's problem is solved.

For simple diagnostic work Mr. McCoy carries a microscope and other equipment in his car. He made a handy little kit out of upholstery and equipped it with snap fasteners so he can hang it up inside his car trunk. This kit contains items like scissors, scalpel and tweezers. The entire kit can be removed in a jiffy and rolled up whenever he rides out to a farm with a dealer.

Customer's charge? Not a cent. It's a matter of company policy. Anyone who buys feed from the H. K. Webster Co. gets this service free of charge, Mr. McCoy points out.

There is no danger of the serviceman spreading disease from farm to farm. Mr. McCoy carries spare footgear, boots, scrub brushes, a pail and disinfectant in the car, and disinfects himself after each farm visit. He recommends a disinfectant containing a pheno coefficient of 4% or better. His preference is for a pine oil disinfectant (containing a pheno coefficient of 4%). He uses it on his hands and it doesn't leave an undesirable odor.

All Dealers Independent

This firm is not integrated, doesn't own contract flocks nor does it own branch stores. All dealers are independent. Some dealers own stores, others work from their own homes, and some are quite large and have their own salesmen.

Most calls for service are made by the dealers, and although Mr. McCoy (or Ronald Sherburne) does the servicing, the dealer gets all the credit. Mr. McCoy prefers to work through the local dealer on service calls, not only for good company relations but for the fact that the dealer carries medicated feeds. Because medicated feeds must be fresh, all dealers stock enough to carry their largest customer two days. Dealers can get truck or carload delivery within a day.

Unless it's on an emergency call, the dealers generally don't know when Mr. McCoy is going to visit their store. Some dealers take him around to visit all of their customers. Others don't want this service. It all depends on the dealer.

Mr. McCoy also acts as an indirect salesman when visiting dealers. "We sell through service," he explains. "You can't go into an independent dealer's store and tell him what to do. He's the boss. Sometimes I pass out service manuals for customers and suggest to the dealer, 'We ought to clean off a place on the counter out front where the customer will see it.' I try to implant the idea without actually telling them what to do. Our policy is to help the dealer and customer in every way possible."

Now and then dealers are given free novelty items to hand out to their customers. "Though the item isn't expensive, it's useful," Mr. McCoy adds. "Recently we gave out ball point pen desk sets. We find them helpful for cementing customer relations and are free to the dealer.

"Don't overlook the small things," Mr. McCoy advises. "Make the customer feel he is important. He is too—mighty important. If he makes money he pays his bills and the dealer pays us. It's all wrapped up in service—service that can be speeded by calling the serviceman immediately regarding a flock emergency. Don't wait. Time might cost the producer money. Service makes for customer satisfaction and helps sell feed."

Mid-South Shippers to Have Meeting Aug. 4-5

MEMPHIS, TENN. — Plans have been made for the sixth annual convention and business meeting of the Mid-South Soybean & Grain Shippers Assn., Aug. 4-5, at the Hotel Peabody here.

Scheduled for Aug. 4 are meetings of the board of directors, resolutions committee and nominating committee for the election to be held Aug. 5.

Plans for Aug. 5 include a business meeting with the report by Albert R. Cravens, president, of the Missouri Soybean Co., Caruthersville, Mo. C. C. Dehne, Stuttgart, Ark., traffic advisor for the association, will offer his "Report on I & S 7008."

Speakers in the afternoon will include Ray Pollock, director of the Grain Division of the Commodity Credit Corp., Washington, D. C.; George Greenleaf, coordinator of elevator and farm supplies, department of short courses at Michigan State University, East Lansing, and a representative of Goodbody & Co., a commodity and stock brokerage firm, who will discuss "Future Marketing."

R. W. Odle to Manage McMillen Feed Plant

FT. WAYNE, IND. — Robert W. Odle has been promoted to plant manager of the Des Moines, Iowa, plant of McMillen Feed Mills, feed division of Central Soya Co., Ft. Wayne.

Robert Odle

In his new post, Mr. Odle will be responsible for general administration of all plant activities, exclusive of sales.

Mr. Odle joined Central Soya in 1937 as a member of the laboratory staff at the company's Decatur, Ind., plant. He was promoted to chief chemist of the firm's Gibson City, Ill., plant in 1939, and became chief chemist of the Decatur plant in 1943. He was promoted to feed technician in 1945, and to product standards manager in 1947. In April of this year, he was named production control manager of the company.

DESIGNED AND BUILT SPECIALLY FOR GRAIN ELEVATORS

TRIUMPH CORN SHELLERS

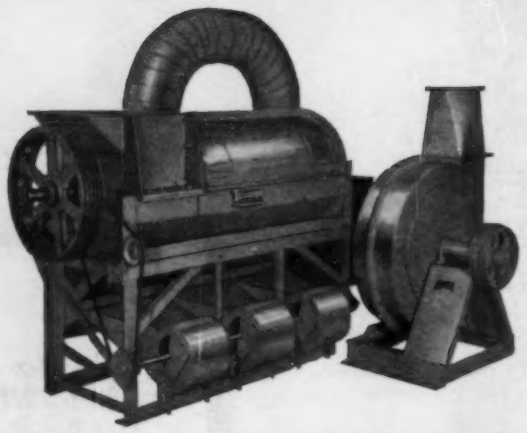
shell, separate and clean the corn; remove cobs, husks and dirt

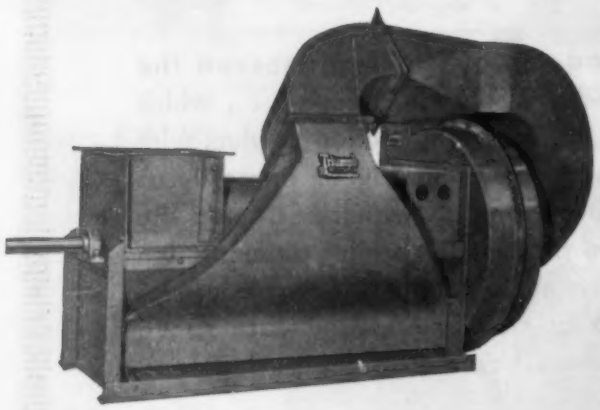
assure fast, efficient, dependable, low cost operation

Improved TRIUMPH No. 1200* Corn Sheller

Complete system including sheller, cleaner and blower. The original and undisputed best. New, improved model assures even less costly operation; better cleaning; easier access to all parts; and more automatic operation. Highly efficient even on high moisture corn, or corn full of husks. Exceedingly compact. Requires little space. Easily adapted to any plant arrangement. Few moving parts. Fully patented. Capacity 40 to 50 tons of machine picked ear corn per hour. Send the coupon today for complete description and specifications!

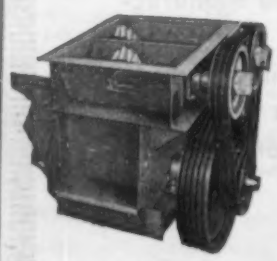
*U. S. Patent No. 2,754,827.





New TRIUMPH No. 900* Corn Sheller

All the patented, proven features of the larger No. 1200 system, but somewhat smaller. Rugged, sturdily built. Fully meets all requirements of grain elevator service. Highly efficient on high moisture corn or corn full of husks. Low intake height. Sheller, cleaner and blower driven with a single motor simplifying installation and operation. Screen, shelling plates and all other internal parts readily accessible. Capacity 30 to 40 tons of machine picked ear corn per hour. Send the coupon today! Get full details and dimensions.



TRIUMPH Double Roll Ear Corn Crushers

Only 10" high. Mounts easily on feed hopper of either a No. 1200 or No. 900 Sheller. Prevents entrance of rocks, tramp iron or other foreign materials. Large capacity. Highly efficient. Double shaft design permits one shaft to operate even though pins in other sheave are sheared. Easily installed. Driven from the sheller. Requires no additional motor. It'll save you time and money! Get full details. Send the coupon today.

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☐ No. 1200 Sheller ☐ No. 900 Sheller ☐ Ear Corn Crushers

☐ Have an engineer survey my plant. (No cost or obligation to me)

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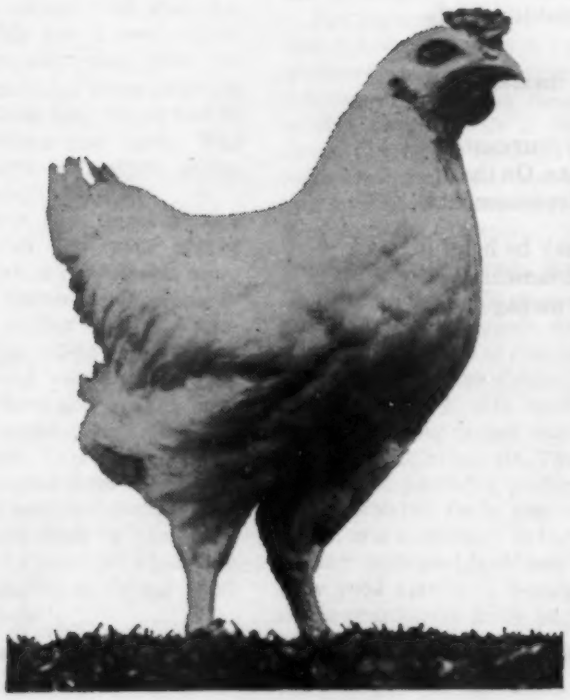


Here's how they do it in Virginia —

Number started 5500
Livability 99%
Age sold.....9 wks. 3 days
Ave. weight.....3.75 lbs.
Feed conversion 2.45

Here's how they do it in Canada —

Age sold.....9 wks. 2 days
Ave. weight.....3.81 lbs.
Feed conversion 2.38

In at least 3 out of every 4 split house tests, under commercial conditions, broilers based on Nichols 108s will lead in **growth** and **feed efficiency.**

Are you content with second best?

Nichols Incorporated

Exeter, New Hampshire

RESEARCH MAKES THEM BETTER
NICHOLS

Your servicemen are saying these things, too

What will medicated formula feeds *do* for your poultry customers? What *won't* they do?

Ever since you first introduced modern medicated feeds, you have been careful to point out their merits and, at the same time, emphasize that these feeds must never be considered substitutes for good management and sanitation.

Your servicemen have regularly carried this message out into the field.

Cyanamid is carrying the same message direct to your customers in national, sectional and state farm publications. On the opposite page is another in a continuing series of advertisements.

Cyanamid hopes that this advertising series may be helpful in persuading farmers to keep practicing the fundamentals of profitable livestock and poultry raising: Good management, strict sanitation, proper feeding.

American Cyanamid Company,
Agricultural Division, New York 20, N. Y.

Sound combination for profitable poultry raising:

Good management and medicated formula feeds

Today's successful poultrymen have learned through hard experience that these two fundamentals go hand in hand.

These men figure all profit angles. They know that a fraction of a cent can often make the difference between profit and loss. That's why they work closely with their feed manufacturer or feed dealer and rely on the counsel they get.

Medicated feeds

When antibiotics and other additives came along, feed manufacturers quickly saw a new way to benefit their customers. They researched and tested these additives and chose those they found best in order to bring you feeds that promote health and growth at the greatest economy to you.

Later, new experiment station trials revealed that some of the antibiotics at higher levels were effective in preventing or controlling specific poultry diseases. Manufacturers then raised the levels in their feeds and were permitted by the Federal Food and Drug Administration to make disease claims on their feed tags. This led to the now generally-accepted term "medicated feeds." Feed manufacturers, recommending these feeds to you, have been careful to point out what they might be expected to do and what they couldn't do.

What medicated feeds do

If you have been a poultryman for a number of years, you are well aware of the enormous benefits these medicated feeds have brought to you.

You've sent more pounds of meat to market by reducing losses from coccidiosis, chronic respiratory disease, synovitis and stresses in broilers. You've increased egg production through control of these same diseases plus blue comb in replacement flocks. You've expanded to year-round production of turkeys through better control of blue comb, sinusitis, blackhead, hexamitiasis and stresses.

For these reasons, you have welcomed medicated feeds and steadily increased your use of them. Most poultrymen have used these feeds wisely; unfortunately a few have chosen to consider them the *answer to all poultry problems* and have relied upon them to the exclusion of other important factors.

What medicated feeds won't do

No poultryman should place sole reliance on medicated feeds. Actually, they are *only a part* of over-all good management. And good management includes starting with good stock and maintaining proper sanitation, housing, ventilation, etc. These are *essential* to profitable poultry raising. Medicated feeds are not intended as a substitute. In fact, even the best medicated feeds may fail to show good results if management and sanitation are badly neglected.

Service men say the same

The service man, who comes out to see you from your feed manufacturer or feed dealer, tells you all these things. He is working for your interest as well as his company's. Most feed manufacturers are glad to offer you soundly-written, full-of-fact pamphlets and booklets that help you solve management and sanitation problems—and tell you *how* and *when* to use medicated formula feeds. You will find this literature constantly reminding you that good management and medicated feeds *must work together* for genuinely successful results. It will pay you to keep this literature on hand—ask your feed manufacturer, feed dealer or service man for it.

American Cyanamid Company, Agricultural Division, New York 20, New York.

• • •

The statements on this page express the sincere beliefs of American Cyanamid Company, producers of AUREOMYCIN® *chlortetracycline,* ARZENE* *arsenosobenzene,* MEGASUL® *nitrophenide and* ENHEPTIN®-*A 2-acetylamino-5-nitrothiazole . . . all used in manufactured feeds.*

**Trademark*

CYANAMID

FEED CONTROL COMMENT

By BRUCE POUNDSTONE
Secretary, Association of American Feed Control Officials
Kentucky Agricultural Experiment Station, Lexington

Action of Feed Control Officials and the Delaney Food Additives Amendment

With the FDA announcement of May 30, 1959, state feed control officials have been reviewing their laws and considering what action is called for in the situation thus created. The matter was appropriately referred to the committee on Medicated Feed Labeling with a view to developing a suggestion that would lead to as much uniformity as possible on the part of feed officials.

Dr. F. W. Quackenbush, chairman, contacted all members of this committee as well as other feed officials and released an announcement on July 10, 1959. This pointed out that that portion of each state law having to do with poisonous or deleterious substances should be carefully examined.

The question further rests in whether or not products formerly considered safe can now be so considered. If so, there would seem to be no reason for a change in policy at the state level and feeds containing estrogens and arsenicals would continue to be accepted for registration so long as the levels and components of these ingredients are proper. The following is the complete text of the statement released to feed officials by Dr. Quackenbush:

"In view of recent events, many state feed control officials have been wondering whether they should now accept new registrations and changes in registration for feeds which contain added estrogens and/or arsenicals. FDA's pronouncement (Federal Register, May 30, 1959) on food additives which may induce cancer in man or animal is understood to apply at present, specifically, to these two groups of drugs, and no additional New Drug Applications nor changes in present NDA's for feeds containing them will be allowed to become effective."

"Prospects are that the Delaney Food Additives Amendment will be tested in the courts. The FDA 'freeze' on estrogens and arsenicals in feeds may, therefore, continue for months or even years before court action is concluded. The question is whether state feed control officials should, in the meantime, continue the policies they have been following or change their policies. It was felt that a recommendation of uniform policy from this commttee undoubtedly would be welcomed by the individual states. The views of committee members were therefore solicited.

"From the views expressed to me by the committee members as well as by various other members of our association, the consensus seems to be that state feed control officials should continue just as we have been doing in the past, that is, accepting new and revised registrations for feeds which contain estrogens and/or arsenicals. Needless to say, the feed industry is hopeful the states will adopt a uniform policy."

"Of course, each state official will need to examine his law carefully before adopting any policy. The Uniform Bill in Section 7 deems a feed to be adulterated '(a) if any poisonous, deleterious, or non-nutritive ingredient has been added in sufficient amount to render it injurious to health when fed in accordance with directions for use on the label.'

"I have not seen the cancer induction data on which FDA's latest restriction is based. However, I understand that cancers were induced in laboratory animals with drug levels considerably higher than those recommended in commercial feeds. The policy suggested above, therefore, would not seem to be inconsistent with the Uniform Bill."

'Approval' by Feed Officials

Feed manufacturers sometimes ask permission, in labeling or in printing information on a container, to show the product as having been prepared in accord with specifications of control officials, an experiment station, or a department of the federal government. Such statements are not permitted and no references to a government agency are allowed with the exception of those called for in certification and inspection, such as may be required under meat inspection procedures, for example.

Approval is not extended to products or operations of individual companies. Review of a label, a formula or method of operation may indicate the plan has been accepted. Official approval of a specific product, however, does not follow such review and acceptance. Representation that such approval has been given, therefore, must not be made in labeling.

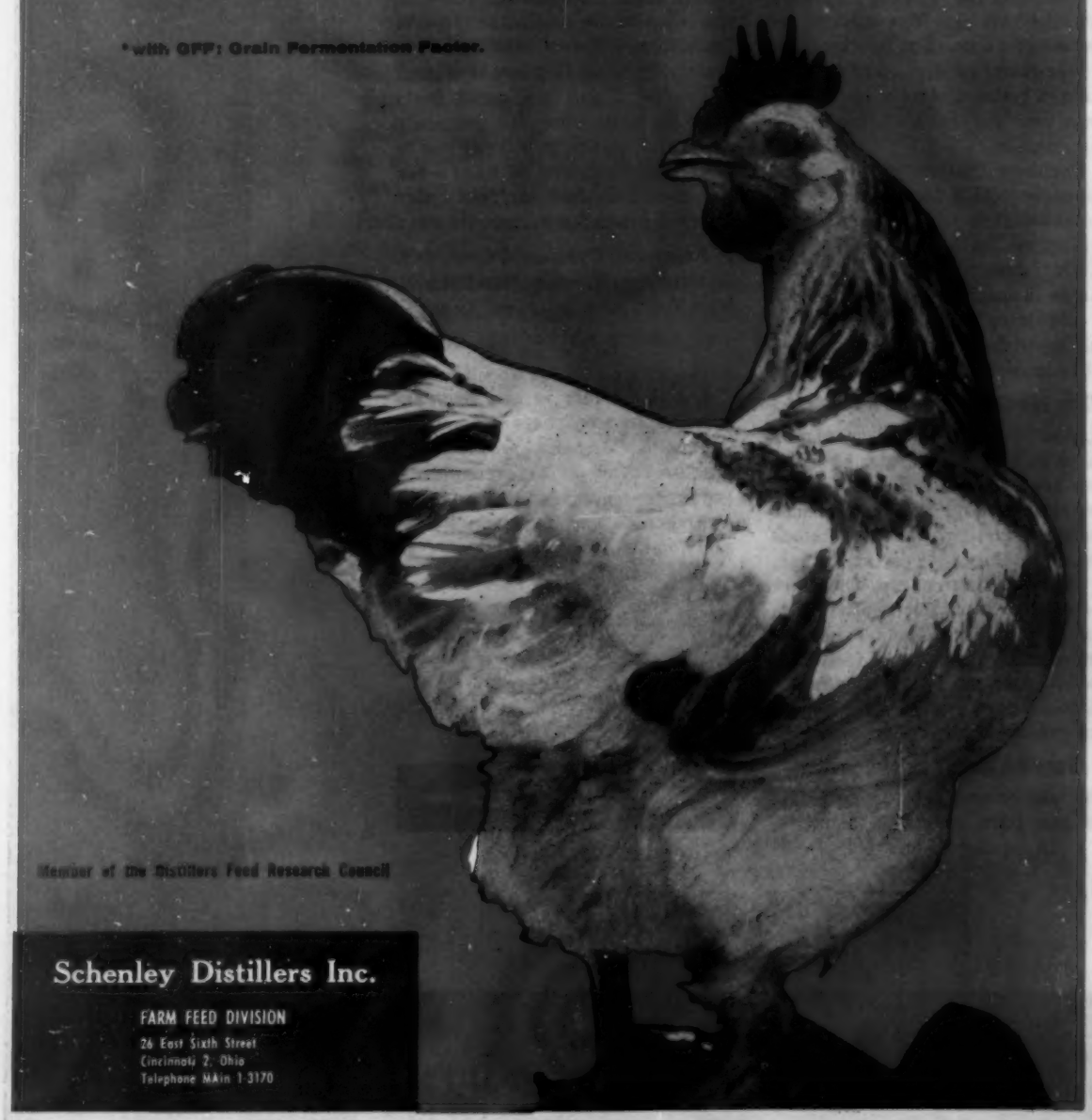
Why does a chicken cross the road?

Naturally to get its Mixed Feed and naturally it is mixed with SOLUDRI, SCHENLEY'S DISTILLERS DRIED SOLUBLES * the popular protein supplement for chickens. It is low in moisture and fibre and high in fat and energy.

Another fine product of Schenley's Farm Feed Division: SCHENLEY CORN DISTILLERS DRIED GRAINS * They are especially valuable in feeds for dairy cows to raise milk production when used with low fat ingredients.

All Schenley Products are always fairly and realistically priced. Write or wire today.

*with GFF: Grain Fermentation Factor.



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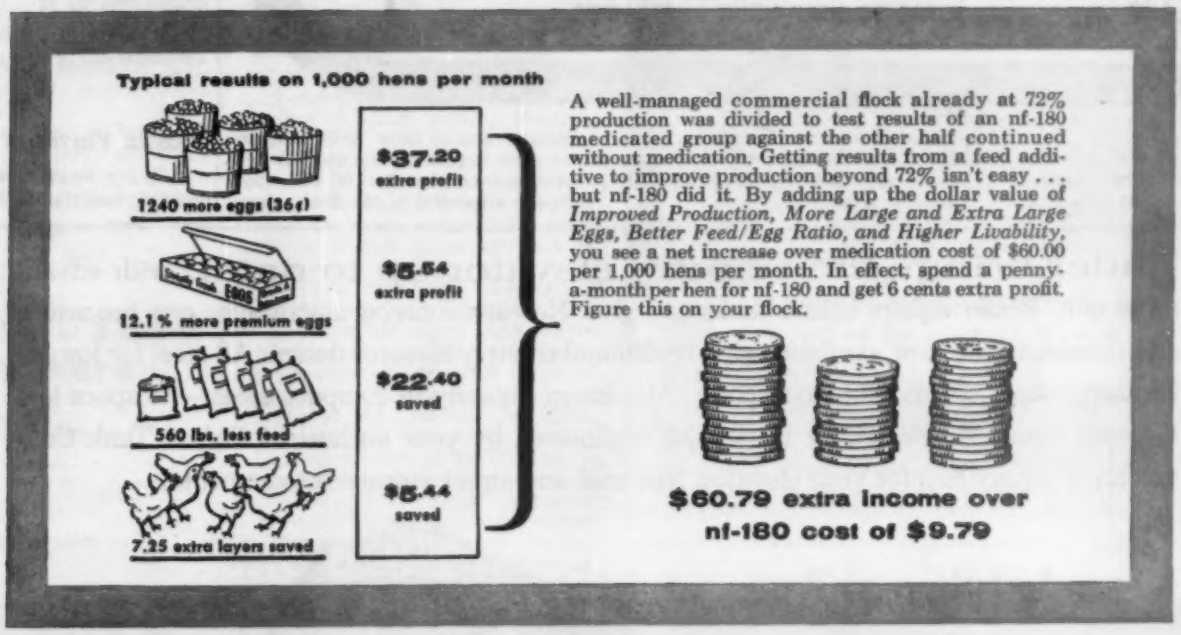
Why you shouldn't settle for anything less than nf-180® in your laying mash


Typical results on 1,000 hens per month
1240 more eggs (36¢)
$37.20 extra profit
12.1% more premium eggs
$5.54 extra profit
560 lbs. less feed
$22.40 saved
7.25 extra layers saved
$5.44 saved
A well-managed commercial flock already at 72% production was divided to test results of an nf-180 medicated group against the other half continued without medication. Getting results from a feed additive to improve production beyond 72% isn't easy . . . but nf-180 did it. By adding up the dollar value of *Improved Production, More Large and Extra Large Eggs, Better Feed/Egg Ratio, and Higher Livability*, you see a net increase over medication cost of $60.00 per 1,000 hens per month. In effect, spend a penny-a-month per hen for nf-180 and get 6 cents extra profit. Figure this on your flock.
$60.79 extra income over nf-180 cost of $9.79

New concept of low-level feed medication improves production, prevents slumps due to stress, gives better feed/egg ratios

Poultry scientists say there is no such thing as a 100% healthy bird. Even the best-managed flocks are pulled down in production by the costly disease drag which always is present.

Until recently, about the only way you could fight disease was to treat outbreaks as they popped up . . . and suffer production losses until the trouble was brought under control. In recent years, laying feed additives have made such treatment easier and more effective. But these additives are sold under many brand names and belong to several broad drug families. While good things can be said about them all, it has been confusing to decide which is best for your flocks. And losses by treating *after* trouble appears have remained a problem.

New Concept: Continuous low-level medication

Now scientists have come up with a more effective way of heading off these problems . . . and losses . . . before they happen. It's a new "ounce of prevention" concept made possible by a superior drug called nf-180. Fed at continuous low levels in your laying mash, nf-180 prevents disease build-up in your flock, heads off losses, steps up egg production and profits.

Does this low-level preventive program work under practical conditions?

Yes, say poultry scientists at five universities and experiment stations. And they back it up with well-documented research data.

It works this way: You continuously feed nf-180 at a low level to provide 25 grams of furazolidone per ton of complete laying ration. nf-180 is so effective that even at this low level it keeps the pressure on germs 24 hours a day. It greatly reduces the constant disease drag which causes lost production, poorer feed/egg ratios, and makes birds vulnerable to sudden slumps caused by stresses.

Outdates all other feed medications

In short, nf-180 low-level feeding simply outdates other feed medications. Flocks protected in this manner show improved production, better feed/egg ratios, improved livability, longer laying life, less likelihood of slumps due to stress, and improved hatchability of eggs.

How well this new method pays off is shown in the chart (above) which is based on a well-managed commercial flock at 72% production when the tests were started.

Why it works

There has been ample evidence that nf-180 is unmatched for quick treatment of disease outbreaks. The big difference between nf-180 and most other drugs has been that nf-180 out-and-out *kills* germs while the other drugs merely *check* germs.

And while all drugs used in feed medications fight some of the germs some of the time, nf-180 *prevents more poultry diseases than any other drug.*

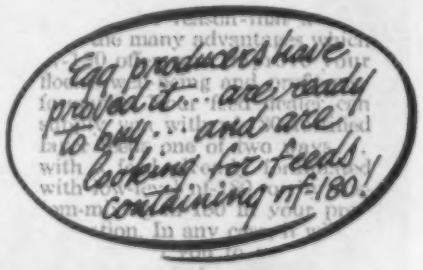
Another way in which nf-180 is different is this: Since nf-180 kills germs, there is no chance for resistant strains to develop. A recent editorial says, "Among the thorniest problems facing researchers is the tendency of germs to develop immunity to drugs."

It points out how long-used antibiotics tend to lose their effectiveness . . . require higher and higher levels to do the same job. The reason is that they simply slow germs down . . . temporarily hold them in check until sturdier, resistant offspring come storming back. Some of these new germs, in fact, thrive on the very antibiotics originally used to treat them.

But in over 5 years of disease fighting, no significant evidence of strains resistant to nf-180 has developed. The same drug levels have continued effective year after year.

Try new continuous nf-180 plan in your feeds

It stands to reason that a drug with the many advantages which nf-180 offers can improve your flock's well-being and profit performance.



You can take advantage of nf-180's fine acceptance among egg producers by adding it to your feed. Ask your Hess & Clark representative, or write, wire or phone for the "nf-180 Continuous Low-Level" service kit to: Feed Products Manager, Hess & Clark, Ashland, Ohio.

NC-8-1381

nf-180® brand of furazolidone

Feed Service BULLETIN BOARD

IDEAS TO HELP YOUR CUSTOMERS

Forage Moisture

There's a lot of difference between silage and sauerkraut, but sauerkraut is about all a farmer gets if his grass silage doesn't have the right moisture content, say South Dakota State College crop scientists.

Forage should have 60-70% moisture when it goes into an upright silo.

Moisture can be checked this way: Squeeze a handful of the finely chopped forage for about 90 seconds, then release your grip. If the ball expands slowly and leaves no dampness on your hand, it's about right.

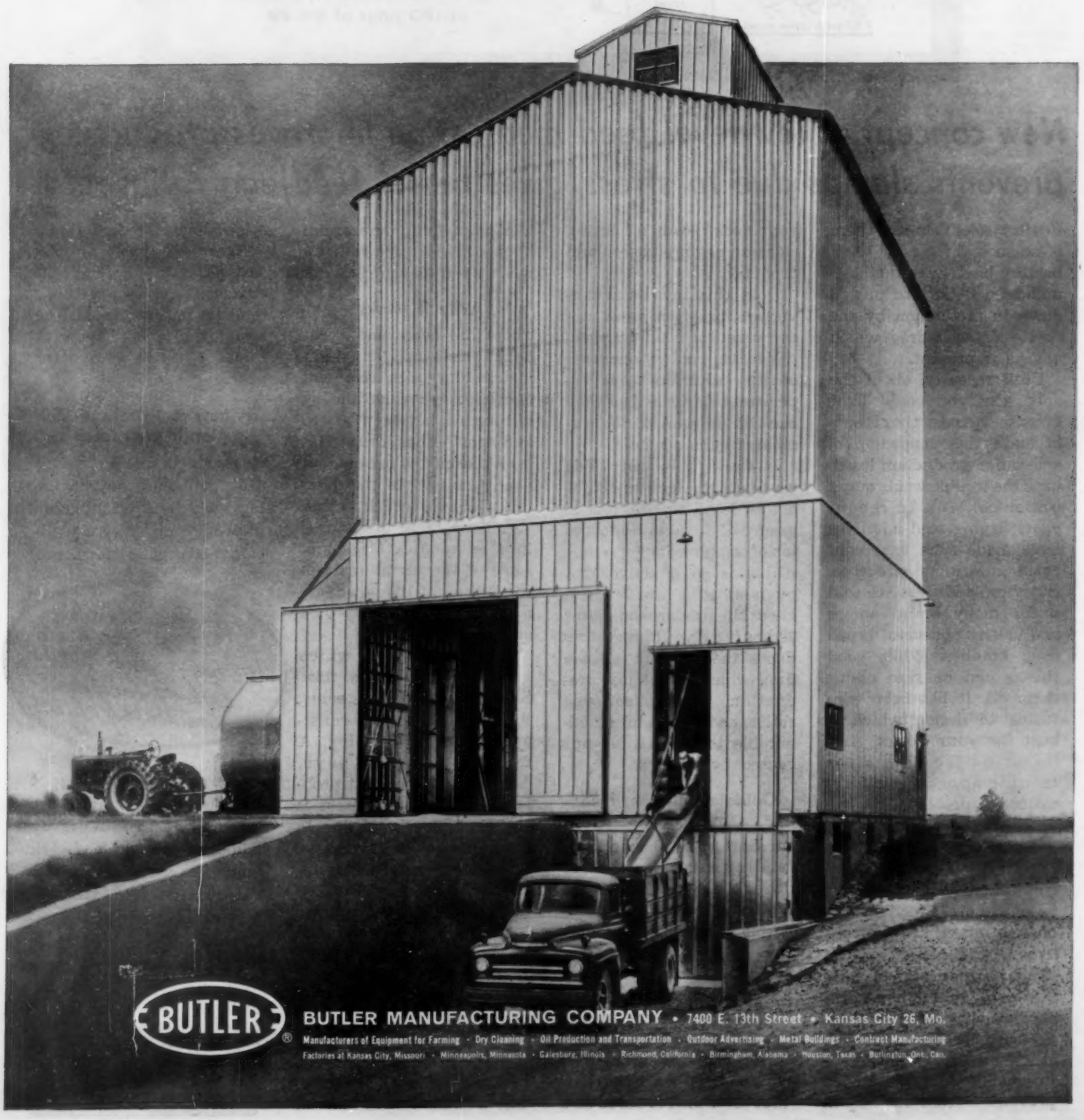
If the ball holds its shape, and especially if juice runs out, the forage is too wet for an upright silo. If it springs out as soon as you open your hand, it's too dry. Forage too wet can be left in the field a while longer, but if it's too low in moisture, the only way to make silage of it is to put it either in the bottom of a conventional silo or in a glass-lined structure.

◆

Plastic Partition Pays Off

A small investment in a sheet of polyethylene film for his broiler house

Butler brings the country elevator up to date... with advantages only Butler square bolted tanks can give. New space saving advantages, new fire safety and durability are now available with traditional country elevator design. All steel for low insurance rates, low maintenance costs. Maximum capacity in compact areas – no space lost between tanks. Fabricated by Butler, job engineered by your authorized Bolted Tank Contractor. Contact him for your elevator, feed mill and annex storage requirements.



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has paid handsome dividends for Frank Trotter who lives near Ozark, Ark.

Mr. Trotter says the film, when used as a partition in his broiler house, reduces drafts and saves at least one third in fuel costs.

The western Arkansas broiler producer said he first hung the plastic sheet in his 3,000-bird house about two years ago as an experiment. It divides the house, making it easier to heat and to feed the chicks. The sheet also prevents crowding, helping to hold death and disease losses at a minimum.

Mr. Trotter says he rolls up the partition when the birds are three weeks old. This gives them full run of the house—but at an age when piling and overcrowding become something less of a problem.

Mr. Trotter paid $3 for the polyethylene sheet when he purchased it two years ago. He's still using the same sheet.

While Mr. Trotter doesn't have a large operation, he feels the same principle could be applied to houses of any size.

◆

Sudden Ration Changes

Sudden changes in the ration of dairy cows can result in serious reductions in daily milk production, according to an Ohio Agricultural Experiment Station dairy scientist.

Dr. J. W. Hibbs says slumps in milk production have been observed most often when abrupt shifts were made from corn silage and hay to forage-crop silage.

"The fact that many farmers are using both meadow-crop and corn silage during the course of a winter feeding season and that often both types of silage are stored in the same silo make it difficult to avoid abrupt changes in the ration," Dr. Hibbs notes.

In feeding trials at the Ohio Agricultural Experiment Station, experiments began during lactation showed milk production dropped 10-20% when cows were shifted abruptly to forage-crop silage from either pasture or corn silage and hay. A period of four weeks was required for the cows to regain their expected maximum milk yields following this abrupt change-over.

Dr. Hibbs offers these feeding suggestions to help prevent drops in milk production and still use maximum amounts of forage crop silage:

- Adapt cows to forage-crop silage during the month before freshening.
- Make changes in amount of supplemental grain fed to compensate for the grain in corn silage when changing to forage-crop silage.
- If possible, avoid refilling silos containing grass legume silage with corn silage. If this is necessary, use corn and cob meal to preserve the forage crop silage.
- Use early-cut forage for silage making.
- Maintain the digestible protein content of the total ration at 8% or higher when large amounts of forage-crop silage are being fed.

◆

Checking Fowl Mites

It might pay producers to check for northern fowl mites in their poultry flocks.

According to Dr. Raymond B. Solac, extension veterinarian, and Prof. John Lofgren, extension entomologist at the University of Minnesota, this pest has shown up in a number of flocks this year.

Heavy infestations of this mite can severely reduce egg production or even kill birds.

Spraying roosts alone won't control this pest, as it will the common red mite. Northern fowl mite is carried by sparrows and other birds, so the first thing to do is keep these birds out of the hen house.

Next, the producer needs to clean the house out and spray or dust the litter. There are several materials that can be used. For example, there's malathion as a dust on the litter. Application rate is a pound of 4% dust per 50 sq. ft. of floor space. Repeat as necessary. Malathion may also be used directly on the birds as a dust, or as a spray or dip.

Another treatment is undiluted sulfur, which can be used as dip or dust. For a dip mixture, use 2 oz. of sulfur for each gallon of water. Dissolve an ounce of soap in the water. Dip birds on warm days only, and wet the feathers to the skin.

Birds can be dusted individually with sulfur, but the application must be thorough.

Roosts can be painted with nicotine

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Aids in Prevention or Treatment of FOOT ROT

Aids in Reduction of RESPIRATORY INFECTIONS

Herds Tested	FIRST TEST Quarters Tested	Clear	Infd.	SECOND TEST (in 60 days*) Quarters Tested	Clear	Infd.	Percent Cleared
A.	32	21	11	28	28	0	100%
B.	95	76	19	112	108	4	79%
C.	80	34	46	68	55	13	72%
D.	68	52	16	68	64	4	78%
E.	74	38	36	79	72	7	81%
F.	83	69	14	78	76	2	85%
G.	60	34	26	44	39	5	81%
H.	36	27	9	28	26	2	77%
I.	16	11	5	16	15	1	80%
J.	32	16	16	28	25	3	81%
K.	48	41	7	60	59	1	86%
	624	419	205	609	567	42	79.5%

INDICATION OF SEVERITY OF INFECTION

Degree	1st Test	2nd Test
Slight	94	30
Infected (Mastitis)	66	9
Chronic (Mastitis)	45	3
Total	205	42

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sulfate, but this alone won't kill all the northern fowl mites.

If northern fowl mites are bothering birds, they can be seen under the feathers, usually near the vent, tail or on the neck. Common mites get at the chickens at night only and aren't usually seen.

◆

Hog Shrinkage

Farm-to-market hog shrinkage, costly to pork producers, can be reduced.

Purdue University staff members have found that hogs lose from less than one half of 1% to 4% weight between feedlot and holding pens. An average 3% shrink represents about $1.25 loss on each 225 lb. hog at $17 prices.

Data collected on nearly 300 heads of hogs further revealed that most rapid rate of shrinkage occurs early in the haul.

Time, rather than distance is the determining factor of shrinkage, since it is the total time hogs are exposed to a strange environment and are away from the feed and water that causes shrinkage.

First, overloading and underloading affect the amount of shrink. Loading at 25% below or 15% above the recommended capacity may increase minimum shrink by 15%. Therefore, the load should not be greater than truck capacity. Hogs should also be loaded easily and carefully to minimize excitement.

Extreme temperatures and humidity increase shrinkage. The most favorable temperatures for hauling hogs range between 20° and 60°. If the producer ships in hot weather, he may make provisions for cooling the animals. The use of wet sand for bedding is a common practice.

"Ah, here it is! Toss it on the truck, Newton."

West Virginia Feed Volume Decreases

CHARLESTON, W. VA.—Commercial feedstuffs sold in West Virginia during the last six months of 1958 totaled 189,698 tons, a decrease of 1,120 tons from the corresponding period of 1957, according to a report from the West Virginia State Department of Agriculture. The retail value of these feeds was estimated at $18,840,226, compared to $17,964,866 for the last half of 1957.

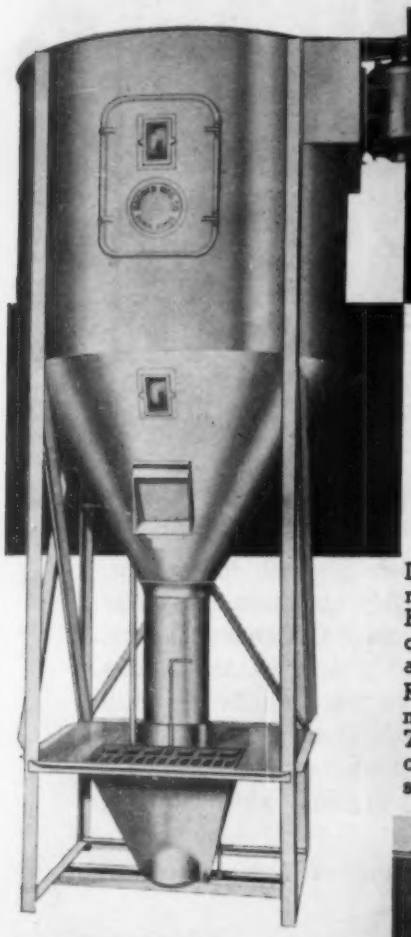
According to manufacturers classification, poultry feeds ranked first in importance and totaled 116,919 tons, or about 62% of all feeds sold. Prepared cattle feed tonnage was second at 31,329 tons, or 17%. Ingredients for miscellaneous livestock feeds and food for pets made up the remainder of the tonnage.

As compared to the last half of 1957, tonnages of all feeds were lower except for poultry and pets which were moderately higher.

Of the total poultry feed sold, 15.6% was laying mash; 4.5%, chick feed; 28.5%, broiler feed; 8.5%, turkey feed and 4.5%, scratch grains.

Hog feed sold represented only 4.3% of the total feedstuffs sold.

Grain products sold during the six months totaled 17,734 tons; soybean oil meal total was 1,246 tons; total protein feeds was 2,437 tons and total minerals was 785 tons.



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Says F. H. Birden
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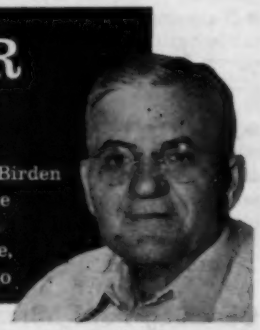

"Our Brower Mixer brought in many new customers and paid for itself in the first six months we used it. We have found the Brower Mixer to be fast, dependable and thorough. We are well pleased with its performance and recommend it to anybody contemplating the purchase of a mixer."

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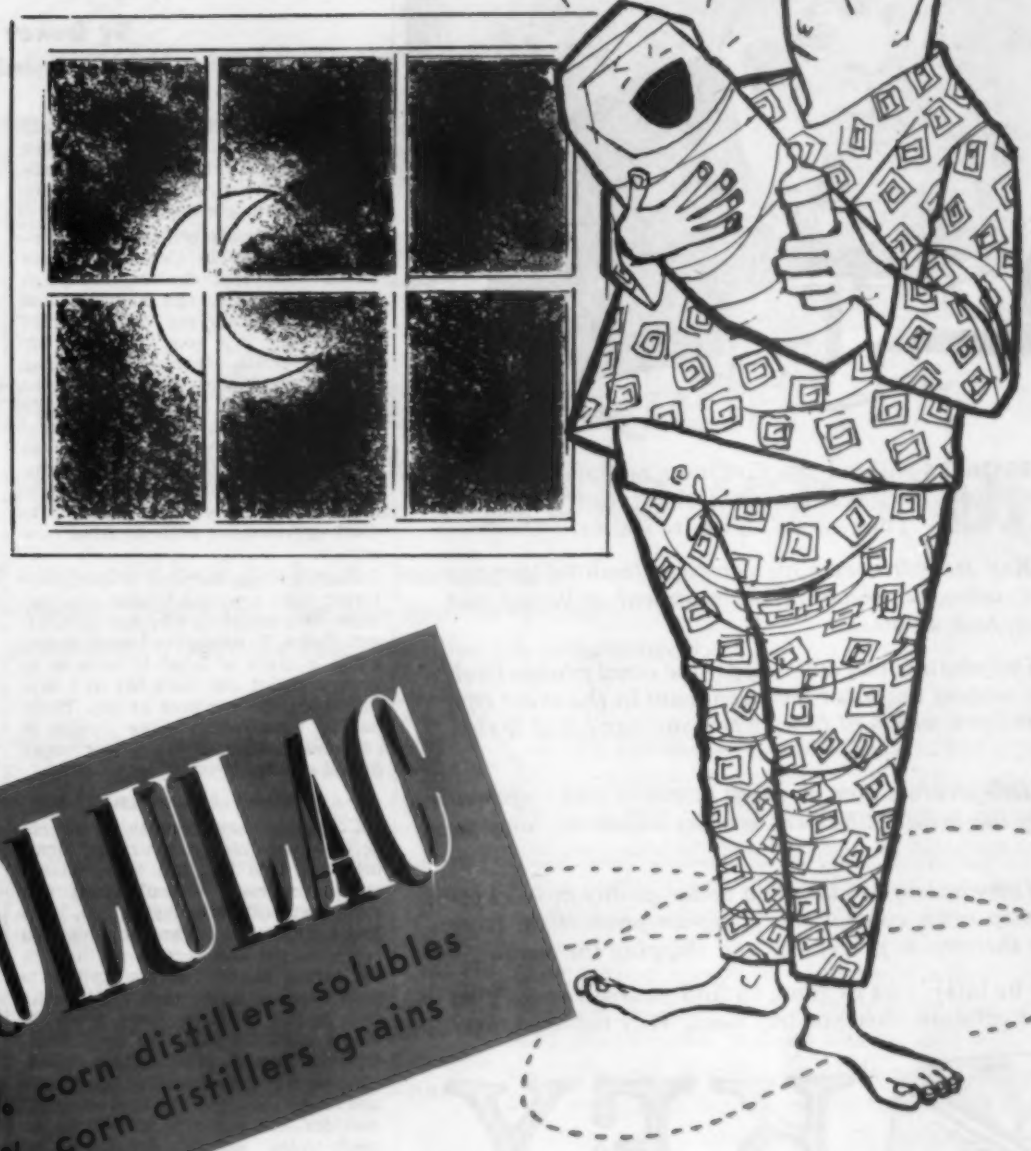

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Contract Egg Farming In Georgia

"Contracts vary as much as the reactions concerning contract egg farming. . . . Most of the contracting in the state is being carried on by feed companies and dealers."

By Dewey McNiece
Georgia Extension Poultryman

It has been estimated that slightly more than 1 million hens are under contract in Georgia, which is approximately one fourth of all hens kept for commercial market egg production.

The reactions to contract egg farming are varied in Georgia. I have talked with feed dealers, hatcherymen, poultrymen, egg handlers and others, and some say that contract egg farming is a good thing for our industry while others at the other extreme said that they hoped the recent period of low prices would break them. One hatcheryman said it wasn't actually anything new as many of our farmers have been farming on a tenant basis all their lives. All feel that we will have some contract egg farming with us from now on.

Contract egg farming is quite different from contract broiler growing. There is a complete turnover of broilers every 9 weeks or thereabouts, while it takes at least 18 months to grow a pullet and keep her in a laying house for one year of lay. There can be considerably more change in economic conditions during this longer period of time.

Types of Contracts

Contracts vary as much as the reactions concerning contract egg farming. One feed mill has three phases in its program. A poultryman can raise just pullets to laying age, keep just laying hens, or can grow his own replacements and keep them through the laying phase. The poultryman is paid 1¢ per bird per week to 24 weeks and 2¢ per bird per week after 24 weeks until the hens are sold. Poultrymen provide the house, labor, equipment, litter, brooding equipment and cooler for eggs. The feed company provides the sexed pullet chicks or ready-to-lay pullets, depending on what program the poultryman is following, feed, medicines and supervision. There is also a provision that the poultryman would receive one half of the net profits above all expenses including the amount paid to him.

A large feed company working through its local dealers has started a rather large operation of contract egg farming. The contracts vary among dealers, but some include all the phases mentioned above. The items furnished by the dealer and poultryman are almost exactly the same as above, but the payment plans are different. The poultryman receives about 1¢ per bird per week to laying age and then either 5¢ per dozen or $1 per hen per year. A few carry an incentive clause, but in some instances it is almost impossible to attain the goal to get a bonus payment. The eggs are all marketed through an egg market, constructed by the feed company and leased by one of our largest meat packing companies.

Another contract pays the poultryman 4¢ per dozen on all eggs produced, with bonus payments of 6¢ per dozen possible. This is broken down into three categories, with 2¢ bonus if mortality is less than 15%, 2¢ bonus if average production per hen for 12 months period is more than 250 eggs; 2¢ bonus if average feed used is less than 115 lb. per hen. The bonus schedule of course, includes bonus payments of lesser amounts if the above conditions are not attained. Last year several of the poultrymen under this contract earned within ½ to 1 cent of the bonus possible.

One contract runs for 15 years or longer, others just for one house of birds. With most of them the poultryman and dealer furnish the same items as mentioned with the first contract listed. Even though two or three contracts with incentive payments possible were mentioned above, most of the hens are kept under contracts that do not provide a bonus.

Incentive Plan

The failure of contracts to contain a practical incentive payment plan seems to be one of the weakest links in the various undertakings. I was talking to one dealer that was receiving 10 to 15% cracks, stains, dirties and other undergrades from his growers. His contract did not contain an incentive payment plan or a penalty for the undergrades he was receiving. He made the statement that his contract would certainly change with the next birds he put out under contract. One mentioned that not only was he getting too many undergrades but the feed per dozen eggs was too high. He ventured a guess that maybe some pigs were being fed some of the poultry feed. This doesn't seem to be a common occurrence but could certainly happen.

Many of the dealers say their contract will be changed with the next house of birds so some of the contracts discussed above may have been changed slightly by now.

One contract guarantees the poultryman a market for his eggs on the basis of a price schedule in effect in the producers production area. Under this program the poultryman is advanced considerable credit but isn't guaranteed an income as in most of the egg contracts.

The two items that will help the contract egg dealers survive is the almost universal requirement that the poultryman have an egg room with refrigeration unit, and the fact that the volume of eggs from these dealers will be large enough to make possible the securing of good out of state markets. Many of the eggs produced in Georgia at the present time are being shipped to Florida although some have been shipped to several other states.

Most of the contract egg farming in the state at the present time is being carried on by feed companies directly or feed companies through their dealers.

EDITOR'S NOTE: Dewey McNiece, author of the accompanying article, is extension poultryman with the Agricultural Extension Service at the University of Georgia, Athens. He has been in this position since Oct. 1, 1956. Prior to this, he was extension poultryman and project leader in the poultry department at Cornell University, Ithaca, N.Y. from 1953 to 1956. He attended the University of Arkansas, University of Georgia, Cornell University and Louisiana State University. Mr. McNiece received his B.S. and M.S. degrees from Louisiana State and at present is working toward a Ph.D. degree from the same institution.

this man makes a good point! (see below)

Lilly INTERVIEWS

HARVEY GITTLESON, COMPTON, ILL.

"Hygromix is convenient . . . automatic . . . gets job done"

"In the old days you'd keep putting the worming off," says Mr. Gittleson. "Pretty soon the pigs and the worms were both good-sized. Hygromix feed does the job automatically."

by Eugene S. Hahnel

Harvey Gittleson ships 500 to 550 hogs to market a year from the Cobb farm near Compton, Illinois. He breeds his sows to farrow in February, and again in July. At each farrowing, he averages around 9 pigs weaned per litter from 30 sows. Controlling worms is a continuous problem on his farm.

"I used to have to worm twice with medicine in the drinking water," Harvey explains, "and it took a lot of time. The medicine still didn't really get the job done. I like Hygromix much better because it's right there in the feed every day. You get the worms before they get started. I think a man can afford to feed Hygromix feed to at least 100 pounds."

Note →

Mr. Gittleson likes to use a complete feed until his pigs reach the 100-lb. level. "I find that the extra nutrients pay off," he explains. "For example, my fall pigs made a pound of gain on each 2.02 lbs. of complete feed, at a cost of only 7.8¢ per pound of gain. Yes, that included the Hygromix. I can certainly recommend Hygromix in the feed. It's money well spent."

There are four reasons why Hygromix in feed "gets the job done" for Mr. Gittleson . . . and can for you, too. It kills baby roundworms, nodular worms, and whipworms as they enter the intestinal tract. It prevents these worms from laying eggs. It protects pigs throughout their critical growing period. And finally, Hygromix does all these things continuously, automatically . . . *as you feed.*

Mr. Gittleson is convinced that plenty of fresh water is a very important part of good swine management.

Spring pigs are kept on concrete all the time. Occasionally Mr. Gittleson turns fall pigs out on pasture. He tries to market 200-pound hogs in 5 months.

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SALES ASSISTANCE from well trained, enthusiastic district managers produces new business and keeps Honegger dealers inspired. Product specialists, such as building and equipment salesmen, help dealers close big sales.

LOCAL PROMOTIONS and "Planned Selling" that move 75-150 tons of feed out of the dealer's stores are not uncommon for Honegger dealers—with bulk of business on cash basis, too. Honeggers help plan and man open houses, hay-makers and ice breakers.

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HONEGGER RESEARCH FARM has attracted over 40,000 visitors in past ten years. Practical research and convincing demonstrations here keep dealers and customers sold on Honegger know-how, and produce more dealer profits!

PATRONAGE DIVIDEND gifts make real boosters of farm wives and kids. Coupon-saving customers get valuable premiums direct from Honeggers without bother or expense on dealer's part. Result: terrific customer loyalty . . . REPEAT PROFITS!

BULK FEED SERVICE at Honeggers' employs king-sized fleet of hopper cars and modern bulk trucks. Honeggers' bulk farm bins are profit-makers that help dealers sew up business.

Putting Research To Work

BY SPENCER H. MORRISON, PH.D., D. V. M.

Control of Udder Edema in Dairy Cows—Clinical Evaluation of Acetazolamide Solution

● H. E. Gouge, A. L. Shor and W. P. Johnson, American Cyanamid Co., Princeton, N.J., Veterinary Medicine, Vol. 54, No. 7, July, 1958, pp. 343-345.

ABSTRACT AND COMMENT

Just recently, a paper by Gouge and Elliott (Vet. Med., June, 1959) on the use of acetazolamide in the treatment and prevention of edema disease in swine was reviewed in this column. Now we have a further report of the use of this compound in the treatment of udder edema of dairy cows.

A total of 82 cattle with parturient physiological udder edema were treated with dosages of acetazolamide ranging from 1 gm. twice daily to 2 gm. three times daily for periods of one to six days. Improvement was reported in 74 cases (90.2%), and 58 of the 82 cases (70.7%) completely recovered.

Thirty-eight of the cases were treated intravenously or intramuscularly initially and then followed by oral administration in many instances. All cows treated by this method showed improvement and 29 cows showed complete recovery (76.3%). Of the 38 cases treated, there were 11 cases of preparturient udder edema and 27 cows with the postparturient type of edema. Only 14.8% of the cows required over three days of treatment for improvement.

The oral route was used in 37 cases of postparturient physiological udder edema, which resulted in improvement in 33 cases (89.2%). Recovery was apparent in 84.9% within three days.

The rapidity of the effect of the treatment would indicate that recovery did not occur due to chance, although no control animals were used in this clinical evaluation, as is often the case in studies of this type. Since no antibiotics were used in conjunction with the treatment with acetazolamide it was felt that possibly the few cases of failure of response with the drug may have been due to an infection associated with the edema.

One interesting observation was the "letdown" of milk in some cases following the previous unsuccessful use of oxytocin. It is stated that failure of "letdown" in young dairy cattle can cause udder edema and congestion, and also that the use of the drug lessens the pain of edema more rapidly than with usual therapeutic measures. Also, some of the clinicians felt that there was less udder damage with the use of the compound. There was no evidence of toxicity in the 82 cases observed, and milk production was not influenced by the addition of the drug to the feed. Some of the clinicians observed that a mild, transient diarrhea was produced, which may have been beneficial in elimination of excess body fluids. Diarrhea stopped when dosage was reduced.

One of the most interesting side aspects of this study was the fragmentary reports from a few of the investigators that the use of 2 gm. of acetazolamide twice daily was successful in treating six cows affected with urinary calculi. If this proves practical, it will go a long way to help in one of the most troublesome of cattle conditions encountered by practicing veterinarians in many sections of the country. It was also reported that 27 of 30 cows with retained placentas were treated successfully with this new compound.

●

Edema Disease in Swine—Clinical Evaluation of Acetazolamide Solution

● H. E. Gouge and R. F. Elliott, American Cyanamid Co., Princeton, N.J., Veterinary Medicine, Vol. 54, No. 6, June, 1959, pp. 295-297.

ABSTRACT AND COMMENT

A clinical field evaluation was conducted with cooperating veterinarians of the treatment of 144 pigs with sodium acetazolamide (2-acetylamino 1, 3, 4-thiadiazole-5 sulfonamide sodium) Vetamox (American Cyanamid) administered intramuscularly or in the drinking water.

A total of 25 pigs in the advanced stage of the condition and not expected to live were treated intramuscularly with varying levels of the drug from 2 to 12.5 mg./lb. of bodyweight. Of these pigs, 80% recovered with improvement evident usually within 16 hours, and recovery in 24-60 hours.

Fifty seven other pigs were treated intramuscularly with either 2 mg. (40

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Dane Kimmell (at left), Peterson's Immuno Geneticist, drawing a blood sample from one of Peterson's pedigreed breeding birds, preparatory to typing.

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Daffin

NEW DAFFIN ROUGHAGE-IZER® SHOWN AT WORK

MONEY-MAKING ADVANTAGES MAKE A DAFFIN WORTH THE DIFFERENCE!

MEN buying mobile mills decide on "a Daffin" so much more frequently, it's obvious they prefer the Feedmobile's many money-making advantages. Here are just a few Daffin "PLUS" features:

★ Roughage-izer that feeds better than 4 bales of hay a minute right into mill; no need to cut twine!

★ Daffin Air Conveyor System lifts finished feed to storage as high as 80 feet.

★ Optional 2-way vacuum pick-up, pressure discharge system to automatically draw grain from bins and speed finished feed to storage.

★ Heavy-duty Hammermill built of ½″ plate steel, equipped with special alloy steel shaft, self-aligning ball bearings.

★ Electronic Feed Table Control for raising, lowering and changing feed table speed.

★ Unequalled Molasses Blending System integrated with Precision Multi-Action Mixer for accuracy.

★ Full-power economy of new 120 H.P. GM Diesel Power Unit to get the job done fast!

★ PLUS a host of advantages such as Sales Training School, valuable merchandising help and network of Service Depots.

Remember, Daffin IS Mobile Milling. IN MOBILE MILLS, as in most things, it PAYS to invest in THE BEST! Write for details TODAY on the complete DAFFIN PLAN FOR PROFIT!

Daffin MANUFACTURING COMPANY

Builders of the World-Famous Daffin Packaged Feed Plants, Pneumatic Conveying Systems, Pelleting Machines, Batch Mixers

SERVICE PARTS DEPOTS: Alabama-Montgomery • Georgia-Perry • Illinois-Springfield • Indiana-Indianapolis • Iowa-Cedar Rapids-Sioux City • Kentucky-Shelbyville • Michigan-Detroit • Minnesota-Rochester • Missouri-North Kansas City • Nebraska-Omaha • New York-Syracuse-Tonawanda • North Carolina-Laurinburg • Ohio-Dayton-Youngstown • Pennsylvania-Lancaster • Tennessee-Knoxville-Memphis • Texas-Dallas-Houston-San Antonio • Virginia-Lynchburg • Wisconsin-Oconomowoc • Canada-Toronto

DAFFIN MANUFACTURING COMPANY, 3287 NORTH PRINCE STREET, LANCASTER, PENNSYLVANIA

pigs) or 4 mg. (17 pigs) per pound of bodyweight of the drug. Although all of these pigs had symptoms of the disease when treatment was started, 82.5% of them fully recovered.

Another group of 62 diseased pigs was given 2 mg. of the drug per pound of bodyweight in their drinking water for five days. This treatment was highly effective, since 93.7% of the animals recovered. No evidence was seen of any toxicity or other side effects with the compound. It is also possible that acetazolamide sodium was helpful in preventing further cases from developing in an affected herd according to the field reports.

This drug may be well worth considering when plagued with edema disease in swine— an all too prevalent condition in some sections of the country. This compound inhibits the actions of the enzyme, carbonic anhydrase and the significant physiological action is diuresis caused by blocking of the formation of H_2CO_3 in the renal tubules, keeping the blood electrolyte changes to a minimum. Excessive fluids, such as present in edema disease, are thus excreted by the kidney.

Expands Facilities

FREMONT, NEB. — Dehy Alfalfa Mills, Fremont, is expanding its alfalfa inert gas storage facilities. The expansion will raise the firm's total gas storage capacity to approximately 400,000 bu. The work is being done by Mid-States Construction Co., Omaha.

ELEVATOR BURNS

PETOSKEY, MICH.—Fire destroyed the Frank Gruler & Sons grain elevator at Petoskey recently. Loss was estimated at $110,000. The structure was built before the turn of the century, and was being operated by Frank and Albert Gruler, third generation sons of the owning family. Albert Gruler said the building was valued at $80,000 and contained $30,000 in feeds, grains, seeds, farming and gardening equipment and other merchandise.

Co-op Builds New Feed Mill in Ohio

FOSTORIA, OHIO—A new $500,000 feed mill built by the Ohio Farmers Grain & Supply Assn. at Fostoria has gone into production. It will supply mixed feeds for 90 elevators in 35 counties in northwest and central Ohio, and to 250 dealers associated in the enterprise.

The mill was designed and engineered by Sprout, Waldron & Co., Inc., Muncy, Pa., and was installed by Lewis J. Sawyer, service engineer for the firm.

The electronic mixing control panel was built by the Frank Electric Corp., York, Pa. One operator controls unloading of grains from trucks or railroad cars.

A pneumatic system of unloading cars and trucks brings incoming grain into the mill where it passes over two magnets to remove any metal, and then passes over a scalper where any non-metalic objects that may be present, such as strings, cords, paper and cloth, are removed.

Grains and ingredients are weighed on automatic scales and the net weight recorded before being elevated over the top of the 86-ft. building and dropped through distributing tubes into 16 large bins, four for grain and 12 for other ingredients.

Grinding is by a 100-h.p. hammermill for corn. There is a roller for crimping oats. The materials then enter the proper bins for blending into various feeds.

One man at the automatic electric console panel blends all feeds and keeps the batches separate in two-ton lots.

Each ingredient is weighed separately and then dumped into the hopper before entering the two-ton horizontal mixer where it is mixed in 3 min. It drops into a lower bin and another batch drops into the mixer. The mixer has a capacity of 20 tons an hour, making it practically a continuous operation.

A breakdown or other trouble shows up immediately on the panel and the location of the trouble is shown by lights.

From the mixer the mixed feed goes to the bulk bin, pellet bin or bagging room. At this point the console operator no longer controls the operation.

The tanks have a capacity of 800 tons of raw ingredients, and all are rodent-proof.

Iowa Feed and Grain Meetings Scheduled

DES MOINES, IOWA—The second annual College-Feed Industry conference for feed salesmen and dealers will be held at Iowa State College, Ames, Sept. 18, according to Emmet Haynes, chairman of the conference committee.

The morning session will include discussions on disease and its relation to nutrition of large animals, by Dr. C. K. Whitehair, Michigan State University; disease and its relation to nutrition of poultry, by Dr. C. H. Hill, University of North Carolina, and the economic situation of commercial egg production in Iowa, by Ralph Trees and Leonard Eggleton, Iowa State College.

The afternoon session will include discussion on the economic situation in swine and beef cattle, by Francis Kutish; producing and marketing quality pork, by Dr. D. V. Catron; producing and marketing quality beef by Dr. W. E. Burroughs, and the attitudes, opinions, sources of information and actions of the feeder, by Dr. J. M. Bohlen and Dr. G. M. Beal, all of Iowa State College.

Bob Skinner, executive secretary, has also announced the annual convention of the Western Grain & Feed Assn. of Iowa will be held Nov. 22-24 at the Fort Des Moines Hotel in Des Moines. Hotel reservations can be obtained by writing to the Western Grain and Feed Assn. of Iowa, 928 Des Moines Bldg., Des Moines 9.

The SWING is Towards
VIT-A-WAY FORTIFICATION

Coast to Coast . . . feed manufacturers are putting more SELL and more QUALITY into their feeds . . . making their good feeds better using patented* VIT-A-WAY Mineral-Vitamin FORTIFIER and VIT-A-WAY services. And . . . they're setting new trends in selling by taking advantage of VIT-A-WAY'S power-packed merchandising programs.

*U. S. PATENT NO. 2,611,702

A COMPLETE PROGRAM to help you sell more feeds!

1. FEED FORMULA SERVICE . . .
Our complete feed formulating department is at your service to help you prepare any type formula for any type livestock feed. Your formulas will be made using local and easily available ingredients . . . and, they will be uniform and result-producing at the lowest possible cost to the feeder. You will get "your own" formulas prepared by some of the nation's finest nutritionists, who are on the Vit-A-Way staff.

2. NUTRITIONAL COUNSEL . . .
Our department of research and control is always ready to answer questions and furnish data on "tomorrow's problems today" . . . to help you meet and solve the problems in your own area. This puts you in a better position to serve your customers with the newest developments in scientific and efficient feeding practices.

3. ADVERTISING and MERCHANDISING HELP . . .
Our complete advertising department will assist you in advertising and merchandising programs . . . designed to promote the sale of your feeds. Ad mats . . . folders . . . point of purchase material . . . radio copy . . . inserts and stuffers . . . hand bills . . . and everything you need to build sales and customer demand for your feeds!

4. DIRECT MAIL PROGRAM . . .
Free mailings that go right into the home of your customers and prospects . . . with your name imprinted on them. These mailings invite them to visit you . . . and further explain to them how your Vit-A-Way fortified feeds will help them get top feeding results and lower feeding costs.

5. SALES TRAINING . . .
Help for you and your salesmen to be sure they are familiar with your products, and how to apply their use to the problems of the feeder. Selling tools, literature, and mailings go to your salesmen to keep them abreast of new developments and findings so they can do a better selling job for you.

You too can put more SELL . . . more QUALITY . . . and make your good feeds BETTER with the VIT-A-WAY PROGRAM.

There's a complete nutritional, formulation, merchandising and selling program TO HELP YOU jump ahead of competition and INCREASE YOUR SALES AND PROFITS!

INVESTIGATE TODAY . . . THE VIT-A-WAY

VIT-A-WAY, Inc.
P. O. Box 4311 Ft. Worth, Texas

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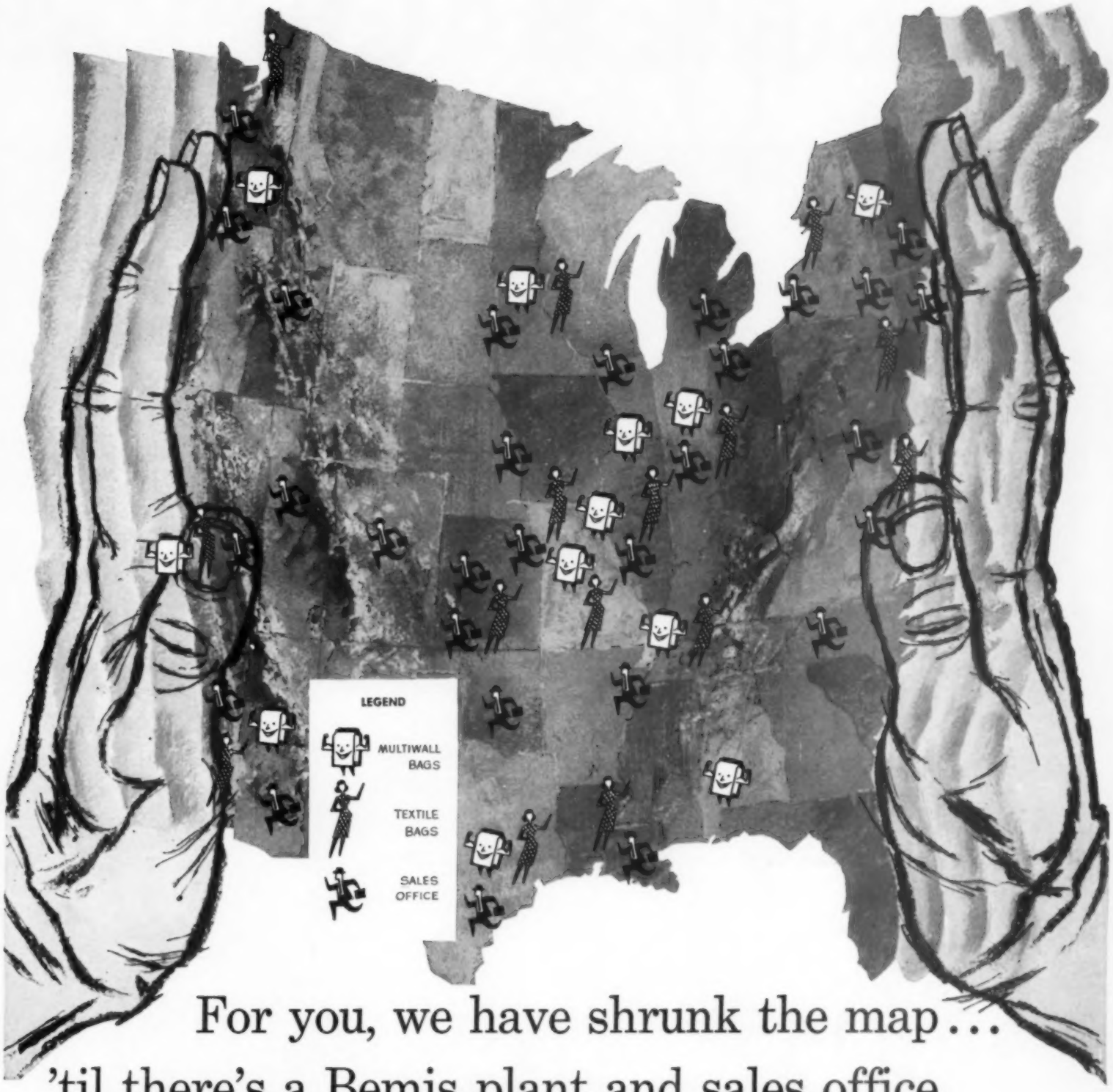
FEEDSTUFFS
than any other publication in the feed industry



For you, we have shrunk the map...
'til there's a Bemis plant and sales office only a hop, skip and jump from you

But convenience and quick delivery are just part of the story. Bemis is also your best source for *everything* you need, packaging-wise.

You can't beat that combination of service and complete packaging product range. In fact, you can't even tie it. So...why not join it?

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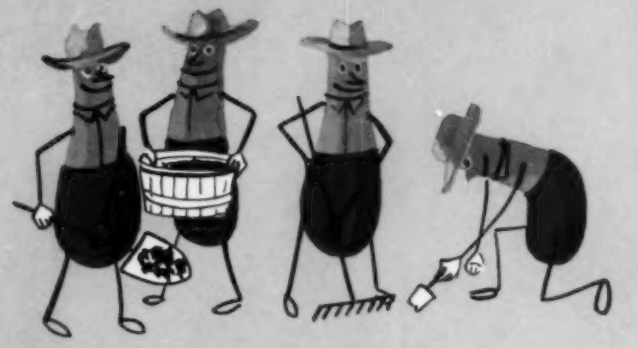
The buy is BACIFERM®.

Selective Action Means

DANGEROUS BACTERIA ARE CONTROLLED



Selective Action Means

BENEFICIAL BACTERIA ARE NOT HARMED

BEWARE THE BAD BACTERIA!

These are "gram-positives" – the harmful bacteria that produce secondary disease, invade the tissues, and form pus and poisonous toxins . . . and, the free-loading gluttons in the intestinal tract that live off the nutrient material that should go to the bird or animal, but doesn't.

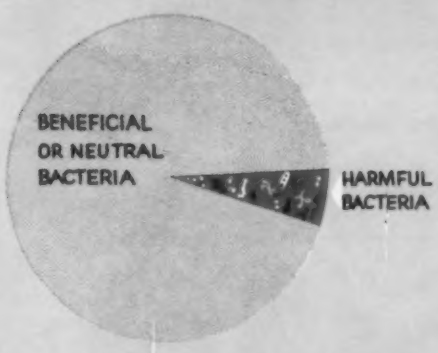
STRIKE WHERE THEY LIVE!

It's when many of the harmful bacteria escape from the gut that they become dangerous. The place to control them – and the only place – is in the intestinal tract – before they invade the tissues, organs and glands.

Buy BACIFERM...

zinc bacitracin antibiotic supplements

...selective action is the pay-off!

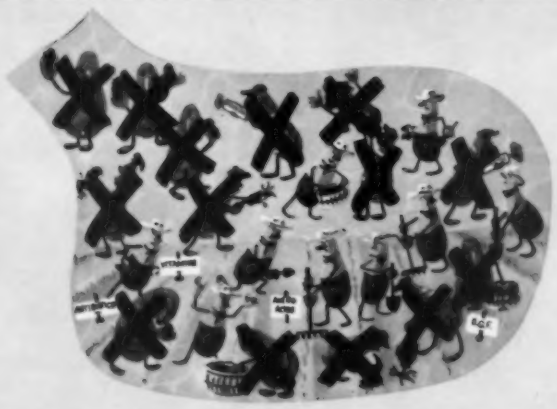


BACTERIA AREN'T ALL BAD!

Of all the bacteria normally present in the intestinal tract of the chicken, the turkey or the pig, only about 5% are harmful. The rest are beneficial or, at worst, neutral. In healthy animals, a proper balance is maintained among the many kinds of microorganisms normally present in the intestinal tract, thus assuring adequate nutrition.

MEET THE FRIENDLY COLIFORMS!

These are the beneficial "gram-negative" bacteria – the productive "farmers" in the digestive tract that "raise" valuable B vitamins. Some antibiotics destroy friendly coliforms, change the normal population balance, and allow harmful, resistant bacteria and abnormal microorganisms to multiply. Baciferm's selective action destroys dangerous bacteria without harming beneficial bacteria.



BACIFERM TO THE RESCUE!

Baciferm, the zinc bacitracin antibiotic supplement, does all its work in the intestinal tract – maintains an effective concentration from one end of the tract to the other. And zinc bacitracin does its job selectively. No indiscriminate destruction of "good" and "bad" bacteria alike – as in the case of some other antibiotics.

The buy is Baciferm – selective action is the pay-off. But that's not all. Only Baciferm contains bacitracin in the zinc form–made under Patent No. 2,809,892. And CSC's zinc bacitracin is not merely antibiotic on an inert carrier – it also supplies B vitamins, high protein, vitamin K and unidentified growth factors.

Anything else? Yes! More and more feed manufacturers want the full bactericidal action of Baciferm because the older "broad spectrum" bacteriostatic antibiotics seem to have lost their punch, appear to have built up resistant strains of bacteria. You can add Baciferm to each ton of feed for $2 to $4 less than the tetracyclines. The buy is Baciferm.

CSC

Animal Nutrition Department

COMMERCIAL SOLVENTS CORPORATION

260 Madison Avenue, New York 16, N. Y.

IN MEXICO: Comsolmex, S.A., Mexico 7, D.F.

CANADIAN SALES REPRESENTATIVE: Norman Stark

that's being selective!

2 dozen eggs for ?

EGGSHELL BRAND Oyster Shell sells so well because poultrymen have learned that properly fed soft, reef shell can help their hens turn out up to 24 better-quality eggs a year.

It costs only a nickel per year per bird to feed EGGSHELL BRAND. These facts help make highly-digestible EGGSHELL BRAND the best-seller it is.

EGGSHELL BRAND OYSTER SHELL
a product of
OYSTER SHELL CORPORATION
BALTIMORE, MARYLAND

Poultry Auction Sales Reported

SPRINGDALE, ARK.—Henry Thomason, manager of the new Arkansas Poultry Exchange, Springdale, has announced sales figures for the auction's first two weeks of operation.

He said that a total of 1,683,100 birds were offered for sale, and that 1,220,900 were actually sold. The birds brought an average price of 16.64¢ lb.

"These figures mean that producers who have sold their birds through the poultry exchange have made an additional $23,000 profit by using our facilities in the past two weeks," Mr. Thomason added.

He said he based his figures on the average market price for similar quality birds. The figures cover the period June 23 through July 7.

The exchange was started at Springdale in an effort to establish a more stable market.

What do you want in a bagging scale?

• speed • accuracy • reliability • durability

You get all these, and more, with a Richardson Bagging Scale. Bagging speeds range from 4 to 30 bags per minute. Extremely accurate, these scales guard you against costly weight give-away and embarrassing short-weights. The durability of a Richardson Bagging Scale is attested to by the great number that have seen *50 years* or more of continuous service – and are still going strong!

Every Richardson Bagging Scale provides the most-modern improvements in design for each type of material weighed. All are products of the world's foremost manufacturer of automatic weighing and proportioning equipment. And remember, with Richardson, you have a nation-wide network of service facilities available within 24 hours, if required.

For complete information on Richardson Bagging Scales, write for Bulletin 0450-B. 1787

Here's the answer . . .

Richardson Scales conform to U.S. Weights and Measures H-44 for your protection.

Richardson
MATERIALS HANDLING BY WEIGHT SINCE 1902

RICHARDSON SCALE COMPANY • CLIFTON, NEW JERSEY
Sales and Service Branches in Principal Cities • Also manufactured in Europe to U.S. standards

The instructor was giving a lecture on parachute jumping and concluded: "And if it doesn't open up, men, that's what is known as jumping to a conclusion . . ."

◆ ◆ ◆

Salesman: "I've been trying to see you for a week. When may I have an appointment?"

Executive: "Make a date with my secretary."

Salesman: "I did, and we had a swell time, but I still want to see you."

◆ ◆ ◆

The lady was stepping from the shower and was about to reach for a towel when she caught sight of a window washer looking through the window at her. She was too stunned to move, just stood staring at the man.

"Whatcha lookin' at, lady," he finally asked. "Aincha never seen a window washer before?"

◆ ◆ ◆

"Dad, I've got my first part in a play," said the young actor. "I play the part of a man who has been married for twenty years."

"Splendid," replied his father. "Maybe one of these days they'll give you a speaking part."

◆ ◆ ◆

There's something feminine about a tree. It does a strip tease in the Fall, goes with bare limbs all Winter, gets a new outfit in the Spring and lives off the saps all summer.

◆ ◆ ◆

"What's the matter with you?" the wife demanded. "Monday you liked beans. Tuesday you liked beans, Wednesday you liked beans; now Thursday, all of a sudden, you don't like beans."

◆ ◆ ◆

Mother was busy in the kitchen when Junior asked, "Daddy wouldn't murder anybody, would he?"

"Gracious no, what made you ask that?"

"Well, I heard him down in the basement saying, 'Let's kill the other two, Joe'."

YOU CAN TELL...

she's had her
CAFNECTAR
this morning

Cafnectar fortifies milk replacers and calf starter formulas with the sweet milk flavor calves love. Write for sample and information.

FLAVOR CORPORATION OF AMERICA
3037 N. Clark St. • Chicago 14, Illinois

What do you mean you give me something extra in every bag of mixing salt?

We mean that in every bag of Morton Mixing Salt there are extras that make a big difference in product quality and performance.

One of the most important is research. Morton has the most complete salt research laboratory in the world. Morton also has more than 25 years' experience in compounding salt and trace minerals. These facilities and "know-how" have resulted in a whole line of tested, superior ingredients in every bag of Morton Mixing Salt. One is Cuprous Iodide, a proven superior patented source of iodine that remains stable from mill to feed bunk.

Another important extra you get is quality control. The finest ingredients are blended and premixed under strict laboratory supervision to assure you Mixing Salts of unvarying high quality.

Extra quality, extra care go into Morton Mixing Salts—and you get them at no extra cost. What's more, you can get Morton Mixing Salt anywhere in the United States.

Mail coupon today for more information!

MORTON SALT CO., Dept. F-725-3
110 No. Wacker Drive
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*Name*_____

*Company*_____

*Address*_____

*City*_____

*County*_____ *State*_____

Morton mixing salts

Trace Mineralized—Iodized—Special

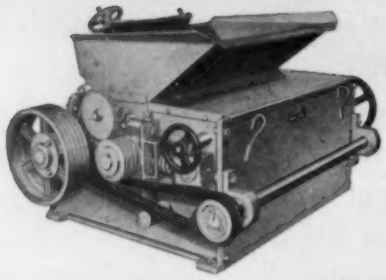
CHECKERBOARD GRAIN COMPANY

Buyers and Sellers of

MILLFEEDS, GRAINS AND GRAIN PRODUCTS

CHICAGO KANSAS CITY ST. LOUIS MINNEAPOLIS

WHAT DO YOU LOOK FOR IN A ROLLER MILL?



PERFORMANCE?
QUALITY?
PRICE?

W-W HAS THE MOST TO OFFER!

Any way you look at it, W-W has the finest roller mill built. It crimps, or cracks, or crumbles every kernel of grain with a minimum of fines. It has precision control wheels, instead of levers. Rolls never clash when running empty. Special 10" diameter chilled, cast alloy rolls are hardened through entire wall, can easily be regrooved time and again — comes in 6" sections, a convenient roller exchange regrooving service is available at low cost. Framework is of heavy cast iron (instead of boiler plate). Sizes available from 6" to 36" width — adaptable to any source of power. See W-W, compare it... you'll buy it.

Write for free literature and prices on W-W Roller Mills. Ask about liberal terms and time-payment plan.

W-W GRINDER CORP. DEPT. 311 2957 NORTH MARKET WICHITA 4, KANSAS

Steady Sales

Quick Turnovers

Good Profits

YOU GET ALL 3 ALL OF THE TIME

when you push...

PILOT BRAND OYSTER SHELL

Consumption of PILOT BRAND Oyster Shell continues without interruption . . . day in and day out, every day of the year. Hens and turkeys, chicks and poults must have it because calcium carbonate is as important to their lives as water.

It is this constant use, plus the fact that pure, 100% usable PILOT BRAND is the largest selling eggshell material in the world, that causes progressive dealers everywhere to always stock and push PILOT BRAND as a matter of course. It always brings steady sales and good profits. And turnovers are so fast, you never have much money tied up in stock.

Order from your distributor... or write to us.

PILOT BRAND OYSTER SHELL FOR POULTRY

Oyster Shell Products Company
Mobile, Alabama

'FEED' COUNTER—A special rack used for storing pallets of several varieties of feeds was turned into lunch counter at the recent "ware-housewarming" for dealers and friends of Early & Daniel Co., Cincinnati, manufacturers of Tuxedo Feeds. The affair marked the opening of the firm's new Tuxedo Feeds warehouse and distribution center at Cincinnati. Food for about 375 was served.

New Feed Warehouse Opened

CINCINNATI—The Early & Daniel Co. recently opened its new Tuxedo Feeds warehouse and distribution center at Cincinnati, with nearly 200 Tuxedo dealers and their families attending.

With an additional 25,000 sq. ft. of storage and shipping area, the company has more than doubled its previous daily shipping capacity. "This addition is one of the first big steps to be completed in our expansion program," said Donn D. Early, Tuxedo Feeds general manager. "New directions in dealer-level merchandising have resulted in increased business, and a bottle-neck at the old shipping docks. These new facilities should help us give much better service to our dealers and their customers."

Mr. Early commented that truck layovers are virtually eliminated by four new docks featuring adjustable loading platforms which match the height of truck beds, and permit mechanical loading, and that rail shippers benefit from new, under-roof rail docks which speed shipments within 24 hours after receipt of orders. The warehouse features the new "A-Just-A-Dock" which matches the warehouse floor to the various truck bed heights.

Parker Hitzfield, Tuxedo Feeds production manager, said that the new arrangement will help the firm check the rising spiral of shipping costs. "Already we have found that our automatic daily inventory lets us schedule all of our lines well in advance of shipping need," he said. The firm's new inventory method involves keeping a 3-4 day supply of all feeds on its active supply list. The three-day inventory was determined to insure freshness. "Although we use approved preservatives . . ." Mr. Hitzfield said, "with a minimum running inventory we offset possible problems from unusually humid weather."

Rail shipping is taken care of on one side of the building, and truck shipments are handled on the other side.

Finished bagged feeds are conveyed from the semi-automatic production line to a mechanical "lazy-susan" distributing table. The table acts as a "governor" at the palletizing point. Here sacks are loaded onto pallets. Fork lift trucks complete the storage operation.

Founded in 1881, the company has three major feed mills at Cincinnati; Sumter, S. C., and Tampa, Fla. It has major grain elevators at Riverside, Ohio; Indianapolis, and Louisville, Ky., as well as smaller facilities throughout the southeastern quarter of the U.S.

Salesman Killed

BOSTON, MASS.—Arthur F. Mulvihill, sales representative for Standard Brands, Inc., Boston, was killed recently in a traffic accident in Brighton, Mass. Mr. Mulvihill, resident of Winchester, Mass., had been New England sales representative for Hunt Club dog foods for several years.

FEED ROUND TABLE—One of the facilities providing increased feed handling efficiency at the new Tuxedo Feed warehouse in Cincinnati is this "lazy susan" distribution table. This picture was taken at one of the demonstrations at the firm's recent "ware-housewarming" party for dealers and their friends. In actual operation bagged feeds are transported by conveyor from the production line through the chute at upper left, and onto the rotating table. Stationed at several points around the table, a team of men palletize the feed for pick-up and storage by fork lift trucks. Tuxedo Feeds are manufactured by Early & Daniel Co., Cincinnati.

Farm and Feed Salt

Smart Idea for Extra Summer Profits

- **Take advantage of increased need for salt!**
- **Display colorful bags, blocks, Liks of Sterling Salt!**
- **Help compensate for lower sales of mixed feeds!**

Livestock in summer usually eat less mixed feeds . . . hence get less salt. Also, cattle on pasture need *more* salt.

A colorful, compact Sterling Salt display is a sure-fire way to remind customers to buy this salt from *you*. Powerful Sterling Salt advertising in Farm Journal, Farm Quarterly, Progressive Farmer, Co-operative Farmer and American Agriculturist tells farmers that cattle need salt and minerals, that their hay should be salted and that Sterling dealers also carry salt for asparagus beds and for water softéners. This advertising *makes sales* from your display.

Order plenty of Sterling Salt to cover this extra summer business—*now!*

QUALITY STERLING FARM SALT PRODUCTS

STERLING BLUSALT: high-quality salt with seven trace minerals (manganese, iron, sulfate sulfur, copper, cobalt, iodine and zinc) in scientifically derived proportions. Available in 100- and 50-lb. bags, 50-lb. blocks and 4-lb. Liks.

STERLING GREEN'SALT: trace-mineral salt plus 10% phenothiazine for effective control of internal parasites. In handy 25-lb. bags with handles for easy carrying. Also in economical 100-lb. bags.

STERLING GRANULATED SALT: premium-quality white salt in 50-lb. and 100-lb. bags for free-choice feeding and custom grist mixing. Also pressed into 50-lb. blocks and 4-lb. Liks—plain, iodized or sulfurized.

Want service with your salt?

You can get it from International Salt Company's Animal Nutrition Department. Located in Watkins Glen, New York, this department does continuing research into the proper use of salt and trace minerals in modern livestock and poultry feeding programs. This is your department to consult at any time for advice on mixing or feed-formula problems and for information on any of the Sterling Salt products.

INTERNATIONAL SALT CO., INC., SCRANTON, PA.

Sales Offices:			
Atlanta	Buffalo	Detroit	Philadelphia
Baltimore	Chicago	Newark	Pittsburgh
Boston	Cincinnati	New Orleans	Richmond
	Cleveland	New York	St. Louis

STERLING SALT

MEMBER AMERICAN FEED afma MANUFACTURERS ASSOCIATION INC.

VAN DUSEN HARRINGTON
DIVISION
F. H. Peavey & Co.
GRAIN SOYBEANS FLAX
Founded 1852
MINNEAPOLIS DULUTH

LA BUDDE
MILWAUKEE, WIS.
MALT SPROUTS
BREWERS GRAINS
DISTILLERS GRAINS
BEET PULP
AND 41 OTHER FEEDS

Millfeed Price Situation And Outlook

By B. C. McCoy
Ralston Purina Co.

EDITOR'S NOTE: Mr. McCoy is associated with the Ralston Purina Co., Kansas City. He presented this report during the Kansas Wheat Improvement Assn. field day at Wichita.

Perhaps I have company when I say October, November, December and January millfeed market developments came as a surprise. We had reasons for optimism as we approached this period, but many of us did not read the signs properly. In trying to reconstruct events, here's how it looks to me:

A. We approached Oct. 1, 1958, with formula feed consumption at an exceptionally high level. This resulted from the fact that during most of 1958 all segments of livestock and poultry feeding were profitable. During 1958 we saw $20 hogs, $30 beef cattle and 20¢ broilers.

B. This heavy profitable formula feeding carried into October-November-December-January, 1958-59. In addition to profitable feeding margins, overall feeding was stimulated by early cold weather.

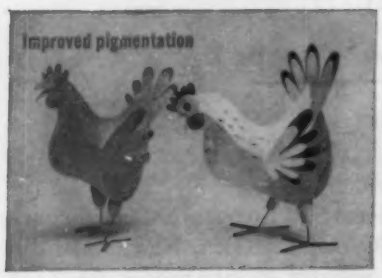
C. We can reconstruct the impact of this heavy formula feeding in the use and price of all feed ingredients of which millfeed was a part. The October-November-December, 1958, use of high protein by-products feeds exceeded the same period in 1957 by one-half million tons. Prices of the meat by-products ingredients averaged $9 ton higher in fall of 1958 compared to 1957. Oilmeal consumption during October-November-December, 1958, exceeded the same period in 1957 by 16%. Fall, 1958, prices of oilmeal exceeded the 1957 prices by $8 to $10 ton. To go down the line, consumption of most grain by-products and feed ingredients was higher during the fall of 1958. Actually total millfeed consumption during the fall of 1958 was about the same as 1957, but in line with the bullish over-all feed price trend gained $14.00 per ton during the period.

There briefly we have an outline of the general factors that dominated our ingredient markets last fall. As good things sometimes come to an end, we have now entered a period where feeding margins are much narrower. More about this later, but as might be expected, formula feed volume is now slower.

Nutrition

In speaking of nutrition, there is a trend in farming that probably all of us are aware of, the trend is toward larger commercial farms. Livestock and poultry feeding is a business with emphasis toward the greatest profits from lowest production costs of meat, milk and eggs. In considering wheat millfeed in present day feed formulations, the mill offal has to compete with other grain products like gluten feed and distillers grains. A major competition, of course, is feed grains,

Your feeds supply these extra performance factors when they contain Tenox BHT
FEED GRADE
an Eastman antioxidant for feeds



Here are four sound reasons for incorporating Tenox BHT-Agricultural Grade into your feeds.

Tenox BHT protects the all-important vitamin balance you build into your feeds.

Tenox BHT improves pigmentation in poultry by increasing the utilization of Vitamin A.

Tenox BHT increases weight gain by maintaining maximum nutritional content right up to the time the feed is used.

Tenox BHT protects poultry against certain deficiency diseases.

Tenox BHT-Agricultural Grade is free-flowing, non-dusting, non-caking. Its particle size is similar to that of other feed ingredients. It blends quickly and does not separate during handling or storage.

Tenox BHT-Agricultural Grade was developed to meet the specific needs of poultry feed manufacturers. It is the result of information provided by feed manufacturers combined with our own extensive knowledge of antioxidant performance.

Build extra performance into your feeds by specifying the antioxidant specially made by Eastman for feed use...Tenox BHT-Agricultural Grade. Tenox BHT-Agricultural Grade is available from leading distributors throughout the country. To find out how you can use this antioxidant in your feed formulations, write today to EASTMAN CHEMICAL PRODUCTS, INC., subsidiary of the Eastman Kodak Company, KINGSPORT, TENNESSEE.

Tenox BHT-Agricultural Grade available in 2 forms

1. Tenox BHT (Conc.)-Agricultural Grade which may be added to your own diluent.
2. 25% Tenox BHT Premix, containing 25% BHT on a nutritive cereal carrier.

SALES OFFICES: Eastman Chemical Products, Inc., Kingsport, Tennessee; Atlanta, Georgia, 3133 Maple Drive N.E.; Chicago, 4200 Dempster St., Skokie, Illinois; Cincinnati, 1626 Carew Tower; Cleveland, 13212 Shaker Square; Detroit, 17325 Northland Park Court; Framingham, Massachusetts, 65 Concord St.; Greensboro, North Carolina, 435 Jefferson Standard Building; Houston, 1300 Main St.; New York City, 260 Madison Ave.; St. Louis, 10 South Brentwood Boulevard. West Coast: Wilson Meyer Co., San Francisco, 333 Montgomery St.; Denver, 851 North Broadway; Los Angeles, 2060 South Garfield Ave.; Phoenix, 111 West Osborn Road; Portland, 1430 S. W. Clay Street; Salt Lake City, 73 South Main St.; Seattle, 318 Queen Anne Ave. Canada: P. N. Soden Co., Ltd., Montreal, Quebec, 2143 St. Patrick St.; Toronto, Ontario, 41 Advance Road.

JOHN F. YOUNG COMPANY
3270 Southside
Cincinnati 4, Ohio
WAbash 1-1950
We Are Distributors of Eastman Chemical Products, Inc.
Tenox BHT

both in the feed manufacturer's market and in the farmer's bins.

In feed formulation, grains can replace middlings in any formula, but the reverse is not true. Milo, corn, barley and oats all contain higher energy levels than wheat middlings. It is true that wheat middlings have a higher protein level than the grains, but the protein in a formula can be balanced with gluten feed, soybean meal and linseed meal.

Let's take a quick look at the place for wheat middlings in specific classes of feeding.

CATTLE

Middlings have a very definite place in cattle feed formulation but their use must be figured on a strictly economic basis. Availability and cost of other grain products and grains must be considered in determining the proper place of middlings in the formula. We are all aware that middlings have a higher protein level than grains but as far as value of the protein is concerned it is generally offset by the lower net energy of middlings compared to grains. In cattle feeding middlings have a net energy of 750 calories per pound compared to corn and milo at 850 calories.

HOGS

About the same as cattle. Middlings have a definite place in hog feed formulations but again are in direct competition with other grain products and ingredients. Actually, calorie utilization of middlings is less in hog feeding than in cattle.

POULTRY

We are now discussing an important segment of the feed business where millfeeds have definitely lost ground. Poultry feeds account for 58% of the record 40 million tons of formula rations produced by the feed industry in 1958. In broiler formulations high energy grains and feed ingredients plus synthetic vitamins have practically eliminated the use of middlings. To a limited degree middlings may be used in growing and laying rations. Broiler feed alone represents 20% of the total feed business, with laying feeds 33% and turkey feeds 5%.

The importance of the switch away from millfeed in poultry feeds is emphasized when compared with the shares of the total output accounted for by other rations . . . 14% for hog feeds, 17% for dairy feeds and only 6% for beef and sheep feeds.

What's Ahead?

In trying to project forward conditions, all you can do is evaluate the facts in hand and arrive at a personal conclusion. Here's the way it looks to me:

We will continue heavy feeding the balance of the year. Farmers will raise more pigs this year compared to last year. Cattle on feed are at record levels. On the other hand laying flocks are expected to be cut back slightly and broiler production shows signs of an early cut back this summer.

Now, let's look at another important factor which has great influence on formula feed business volume . . . livestock and poultry prices. Hog prices have been declining. Last fall we were looking at Chicago hog prices of $18.50 to $19 cwt. With the increased pig crop coming up this fall we can visualize $14 to $15 hogs at Chicago. As brought out earlier, the farmer of today is a business man. When his income is cut, he cuts cost. One of the major costs of his operations is formula feed cost. A very memorable example of what can happen when hog prices go down is the fall of 1955. Hogs dropped to $10 to $12 and hog feed business declined sharply.

The outlook on cattle prices isn't quite so serious. Last fall steers averaged $26.75. At this time we expect fall prices to decline only slightly

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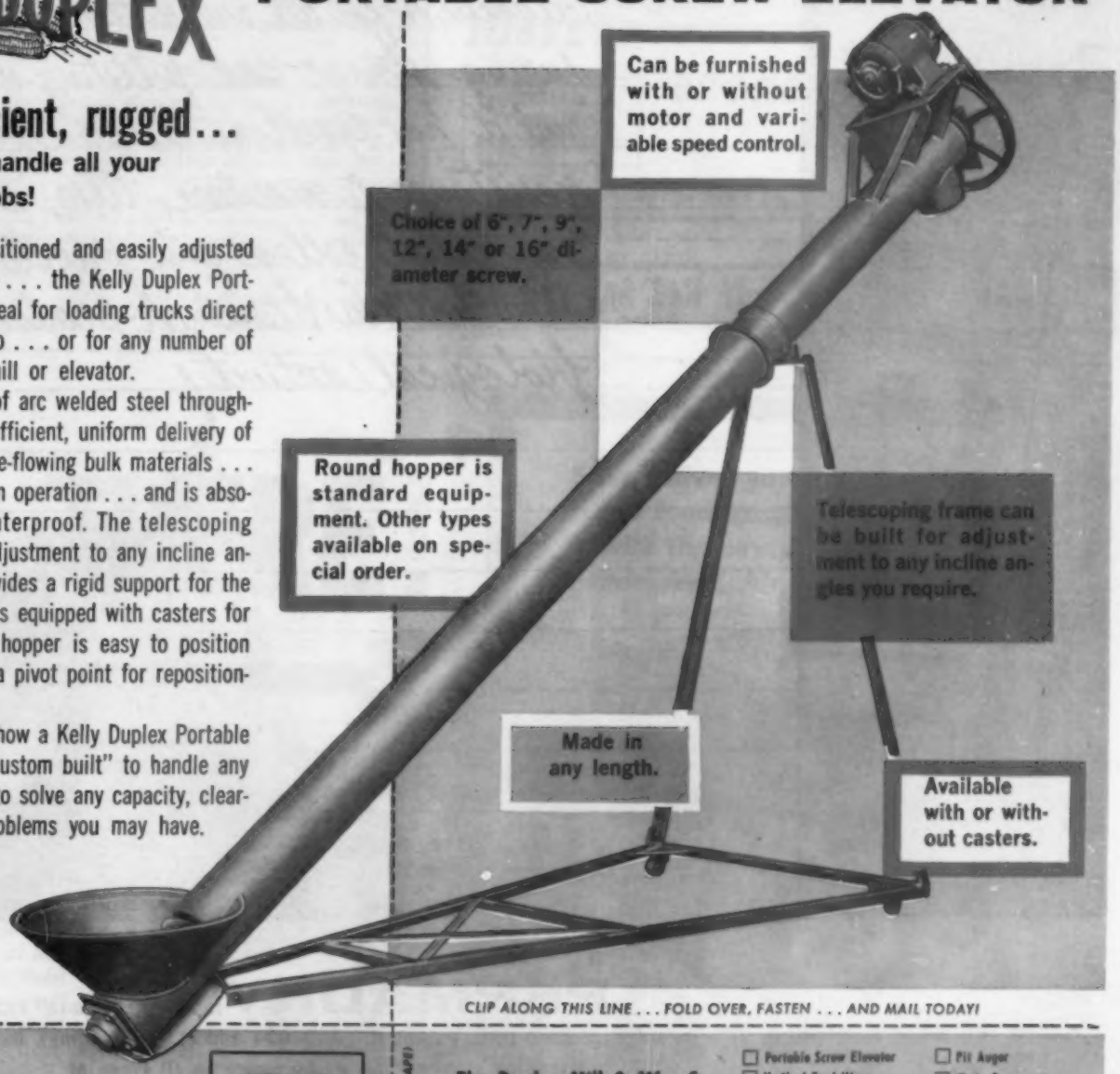
Easily moved, easily positioned and easily adjusted to any angle you require . . . the Kelly Duplex Portable Screw Elevator is ideal for loading trucks direct from a feed mixer or silo . . . or for any number of jobs around your feed mill or elevator.

Ruggedly constructed of arc welded steel throughout . . . it assures you efficient, uniform delivery of grain and all types of free-flowing bulk materials . . . is smooth and noiseless in operation . . . and is absolutely dustproof and waterproof. The telescoping frame can be built for adjustment to any incline angles you require . . . provides a rigid support for the conveying tube . . . and is equipped with casters for easy moving. The round hopper is easy to position . . . even when used as a pivot point for repositioning the discharge.

We'd like to show you how a Kelly Duplex Portable Screw Elevator can be "custom built" to handle any number of jobs . . . and to solve any capacity, clearance or incline angle problems you may have.

Check and mail card today for literature and full details.


Can be furnished with or without motor and variable speed control.
Choice of 6", 7", 9", 12", 14" or 16" diameter screw.
Round hopper is standard equipment. Other types available on special order.
Telescoping frame can be built for adjustment to any incline angles you require.
Made in any length.
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Yes, I'm interested in the KELLY DUPLEX machinery checked at the right. Please send me full information on these machines without any obligation.

Layout service and planning details available without cost.

- ☐ Portable Screw Elevator
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- ☐ Magnetic Separator
- ☐ Cob Crusher
- ☐ Bucket Elevator
- ☐ Pit Auger
- ☐ Chain Drag
- ☐ Twin Molasses Mixer
- ☐ Hammermill
- ☐ Corn Crusher-Regulator
- ☐ Grain Blower
- ☐ Corn Scalper
- ☐ Mill Blower
- ☐ Grain Feeder
- ☐ Electric Bag Cleaner
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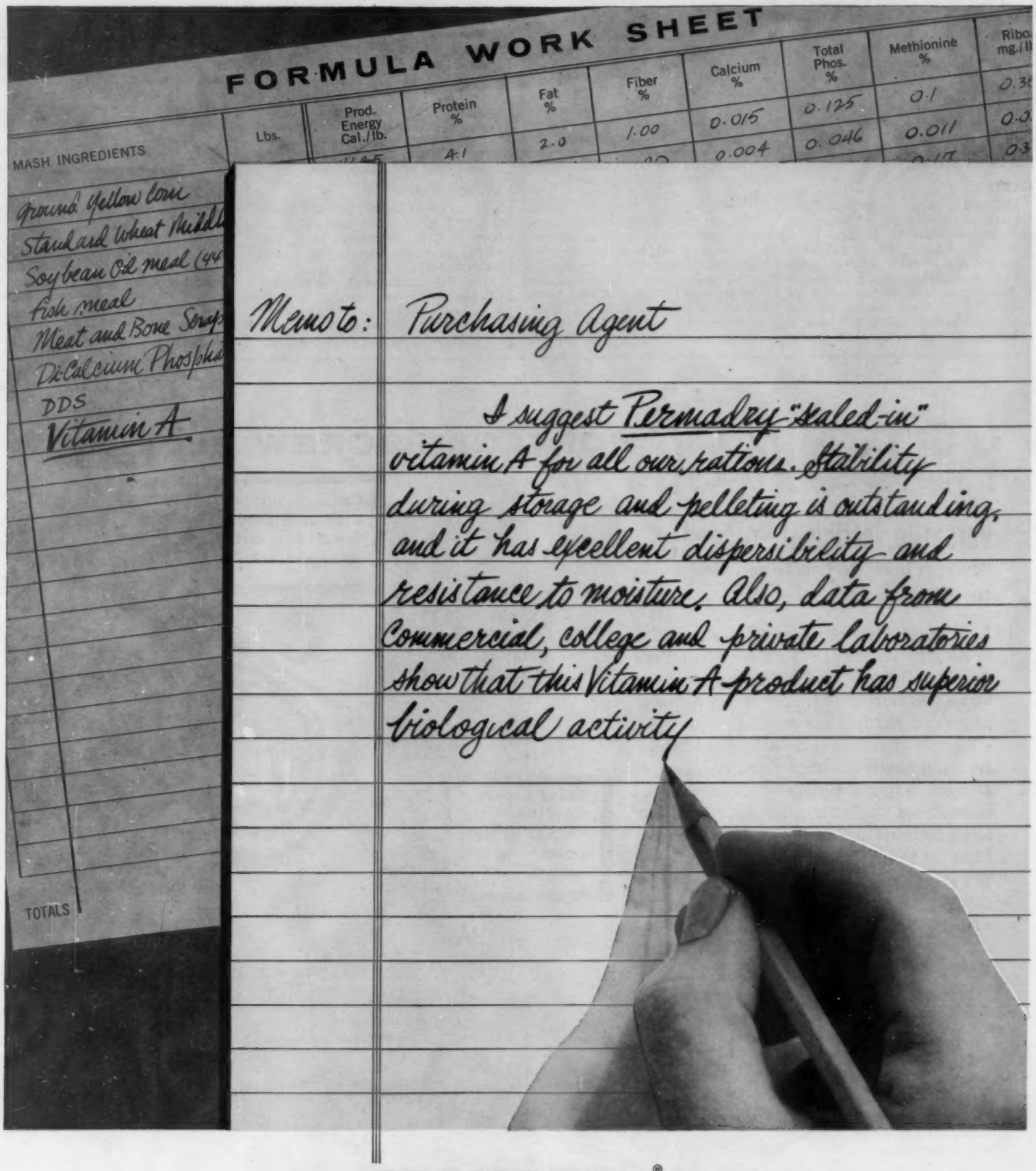

PERMADRY® is THE "sealed-in" vitamin A made by a patented process (U.S. Patent No. 2406634 and others pending). Its use assures outstanding stability and performance in all types of formula feeds. Permadry resists the destructive action of minerals and moisture which are so harmful to other types of vitamin A. Write for a sample and all the facts about Permadry. So good no one else can match it.

Literature supplied on request

LESS FEED MORE MEAT

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under this level. However, if hog and broiler volume is lower, cattle business will not be able to fill the gap.

In the total demand picture, grains and feed ingredients (including millfeed) will be available and in competition with each other for the feed business that is developed.

Grain Outlook

Now, let's go to the grain outlook. Barring a disastrous drought we should have abundant supplies of feed grains and ingredients. Grain stocks on farms and in interior mills are at an all time high. You read every day that CCC grain holdings are increasing with every crop take-over. You are probably all aware that CCC has sold "off grade" grains both in terminal markets and country bin sites.

Here's a factor which affects all of us. The 1959 grain support prices are sharply lower than 1958 for example:

	1958	1959
Corn	1.36 bu.	1.12 bu. (grow all you want)
	1.06 bu. noncompliance	
Oats	61c bu.	50c bu.
Barley	93c bu.	77c bu.
Milo	1.83 cwt.	1.52 bu.

Terminal loan rates are down even more. The 1959 milo loan in Kansas City is down to $1.90 cwt. against $2.31 last year. This represents a drop of 41¢ per cwt. or $8.20 per ton.

In these days of surpluses, I feel that we are being liberal if we consider the loan price as being the value of the grain in the farmers hands. Actually, large quantities are sold under loan prices. It seems evident that the lower loan figures put a cheaper feed ingredient in the hands of the farmer. I believe this promises pretty stiff competition for millfeed. As a matter of fact, I feel that the lower loan prices put a damper on price optimism not only on millfeed but on the whole price spectrum of feed ingredients.

We are now at the point where we should evaluate the factors which I have brought out. I am not going to make a dollar and cents forecast. As a general statement I do believe millfeed prices are going to average lower this summer than they have for the last several years.

Also I believe the factors in the market today indicate caution on any price optimism for this coming fall. Even though we had unexpected high millfeed markets during the fall of 1958 I remind you that bulk midds did not sell in Kansas City over $29 ton between Oct. 1 and Dec. 31, 1957. As a matter of fact, bulk midds were selling at $26 ton on Dec. 26, 1957, which was $20 under the same date of 1958.

For anyone planning forward millfeed prices, I urge you to study both 1957 and 1958 records . . . and be aware of the possibility of setting new lower average prices . . . before coming to a decision.

Shipping Lambs to U.S.

SAN FRANCISCO, CAL. — A Sidney, Australia, firm is making a first shipment of 30,000 lambs to the U.S., according to the U.S. Department of Agriculture's Foreign Agriculture Service.

A coastal passenger liner, the Delfino (ex-Westralia), has been converted to carry lambs on a full-time basis once every two months. Press reports in Australia indicate that the Sidney firm plans to send about 200,000 slaughter lambs to the U.S. yearly. On their arrival, the lambs will be on feed and quarantine for 30 days, after which time they will be slaughtered.

The Delfino will carry approximately 1,000 tons of concentrates and fodder.

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A competitively priced grade that has a record for improving the quality of mixed feeds. Also available in pelleted form.

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Put it THERE!

Spot deliver your customer's processed feed exactly where he wants it with the new Jay Bee All-in-One Feedmaker® Air Unloading System

Jay Bee's air conveyor—white arrows in illustration—adds another service to the All-in-One Feedmaker's high volume, low-cost grinding, mixing, and blending operation.

Now you can pipe processed feeds directly from the mixer to storage bins, feeders, hoppers—overhead or ground level—at distances up to 30 or 40 feet. Flexible 4-inch tubing can be easily joined in any number of lengths. Powerful air delivery puts the feed right where it is needed—instantly, without waste. The whole operation is quick, clean, efficient—giving your customer better, faster service—making less work for your operator.

● And remember—the Jay Bee All-in-One Feedmaker gives the same fine "textured grind" all Jay Bees deliver: horsepower for horsepower, screen for screen, Jay Bee hammermills are unexcelled for their consistently uniform texture of grind.

Note to owners and operators: Take advantage of Sedberry's complete mill installation service—every step from plan to production. This coupon will bring you complete information.

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Magnesium Deficit Causes Calcium Deposits in Calves

WASHINGTON—Prolonged deficit of magnesium in the diet causes deposits of calcium in the large arteries, muscles and hearts of growing dairy calves, U.S. Department of Agriculture scientists report.

In actual dairying practice, most diets fed growing calves contain enough magnesium. The value of this research by Dr. J. William Thomas and Dr. Mitsuo Okamoto, dairy nutritionists of USDA's Agriculture Research Service, lies in its basic contribution to knowledge of how calves utilize magnesium nutritionally.

In their continuing studies of calf nutrition at Beltsville, Md., Dr. Thomas and Dr. Okamoto produced acute and chronic magnesium deficiencies by putting calves on milk diets containing various levels of magnesium, and by feeding them low-magnesium feeds such as timothy hay, corn and urea.

Results suggest that besides the amount of magnesium in the diet there are other important factors regulating magnesium utilization by calves, according to the nutritionists. Work now in progress indicates that the calcium - phosphorus - magnesium ratio in feeds consumed may be important in determining the most effective use of magnesium by calves.

Generally, length of life increased as magnesium intake increased. Weight gains of milk-fed calves were excellent excepting those fed the lowest magnesium rates. A chronic deficiency of magnesium in an otherwise good diet ultimately showed up in a sharply reduced rate of gain followed by convulsions and death.

Calcification in the large arteries and heart was found in calves fed milk furnishing only .5 or .8 grams of magnesium per cwt. of body weight.

Calcification was never found in calves fed milk furnishing more than 1.4 grams of magnesium per cwt., in calves fed diets of natural feedstuffs, or in calves less than 100 days old. The scientists believe it takes at least four months of just-below normal intake to cause calcification.

Stauffer and Victor Announce Merger

NEW YORK—The directors of Stauffer Chemical Co. and Victor Chemical Works reached an agreement in principle for a merger of the two companies subject to stockholder approval, announced August Kochs, chairman, and Rothe Weigel, president, of Victor, and by Christian de Guigne, chairman, and Hans Stauffer, president, of Stauffer.

The merger proposal provides for an exchange of one share of Stauffer common for each share of Victor common. This will involve issuance by Stauffer of approximately 1,700,000 common shares in addition to the 7,242,670 Stauffer shares now outstanding. It is contemplated that the Victor 3½% $100 par value preferred shares will become 3½% $100 par value preferred shares of Stauffer.

As soon as the necessary formalities are completed, a plan of merger is to be submitted to the stockholders of both companies.

The consolidation will unite two pioneer companies. Victor's operations in phosphates and allied products will complement Stauffer's position in basic industrial and agricultural chemicals. Sales of the combined enterprise in 1959 are expected to exceed $225 million.

The Stauffer board will be expanded by the addition of three members of the present Victor directorate. The Victor organization will remain intact, with headquarters in Chicago. Victor operations will be carried on as the "Victor Chemical Division" of the Stauffer Chemical Co. with Rothe Weigel, now president of the Victor Chemical Works, as the president and general manager of the division.

National Pet Food Institute Convention At Chicago Sept. 9-10

CHICAGO—The second annual convention of the Pet Food Institute, national association of dog and cat food manufacturers, is scheduled for Sept. 9-10, at the Drake Hotel, Chicago.

The two-day meeting is designed to be of value to both large and small manufacturers, according to Parker Long, Quaker Oats Co., convention chairman.

The Sept. 9 program will include reports on activities since the last convention in the areas of industry, market and nutritional research, state and federal regulations, membership development, and public relations and publicity. A market survey report from American Can Co. will also be presented.

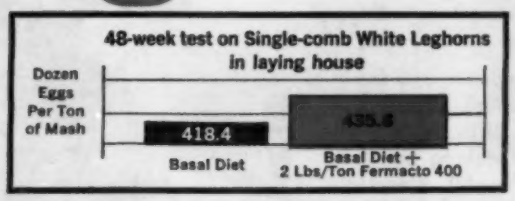
Local problems in marketing will be emphasized Sept. 10 in a discussion by a panel of regional manufacturers, according to Mr. Long. Also included in the program will be a talk on "Human and Animal Health Problems and Their Inter-relationship," by Dr. James Steele, chief of the veterinary public health section of the U.S. Department of Health, Education and Welfare.

Red Motley of Parade Magazine, Pete Cash of Television Bureau of Advertising and Kevin Sweeny of Radio Advertising Bureau will present a debate on "Which Advertising Medium Is Best for You?"

Feed Firm Incorporates

CHICO, CAL.—The Chico Seed & Feed Co. has filed articles of incorporation with Frank Jordan, secretary of state, to be capitalized at $200,000 in $10 par shares. The directors are listed as George Wellman, president; Dr. J. M. Humphreys, first vice president; T. C. Wellman, second vice president and Nate Burns, secretary-treasurer.

Two bits can get your customers 17 extra dozen ... that's all it costs to fortify 1 ton of mash with fermacto 400 the unique blend of multiple fermentation factors for complete ugf fortification. Here's proof...


48-week test on Single-comb White Leghorns in laying house
Dozen Eggs Per Ton of Mash
418.4
435.8
Basal Diet
Basal Diet + 2 Lbs/Ton Fermacto 400

And for economical production without *over-fortification* try Borden's 300 the balanced laying mash supplement containing fermacto 400 and all essential micronutrients at about $1.25 per ton on an all-mash basis. For *custom* blended micronutrients, too, contact your Borden's field man.

For complete price schedules and information contact

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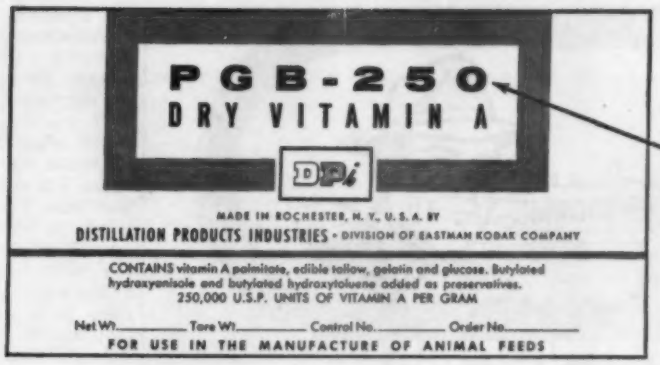
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250,000 U.S.P. UNITS OF VITAMIN A PER GRAM
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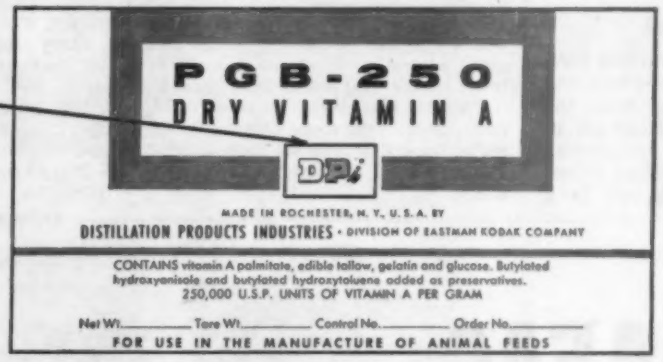
FOR USE IN THE MANUFACTURE OF ANIMAL FEEDS

This is the trademark of DPi's dry vitamin A for fortifying feeds, premixes, concentrates, and other products fed to poultry and livestock. It consists of golden orange spherical particles in a size range between 30 and 120 mesh.

DPi has been a primary producer of vitamin A for a long time, was first to synthesize it commercially in this country, produces vitamin A in a modern plant using methods and processes developed in DPi laboratories.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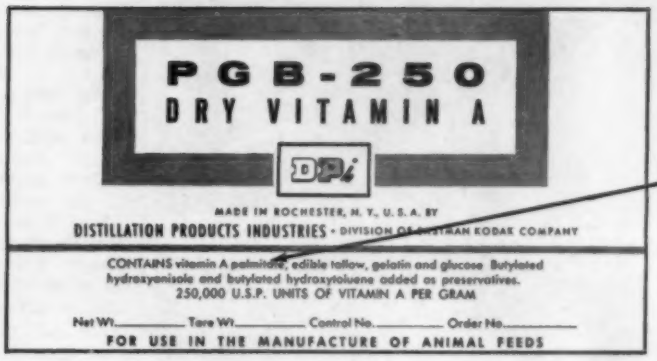
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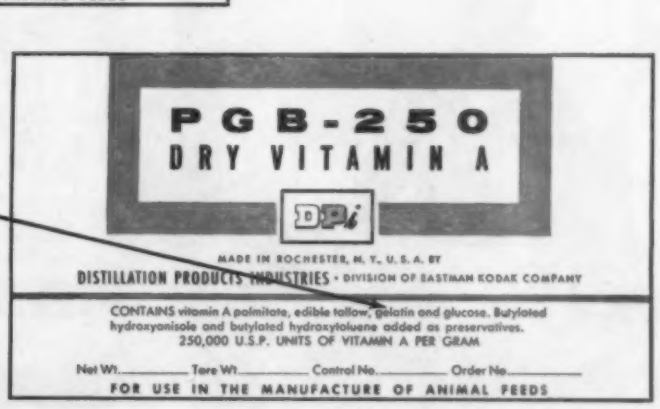
This is the inherently stable form of vitamin A. It resists the effects of heat, moisture, and long storage.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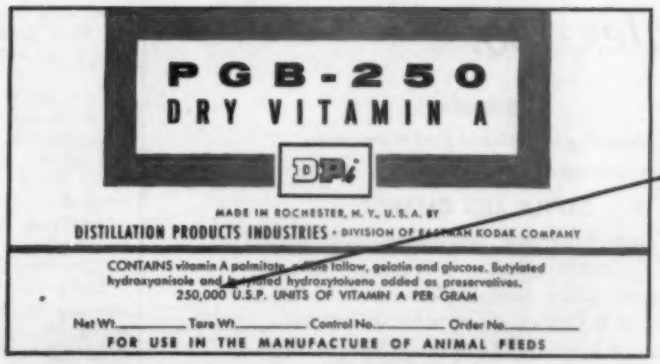
The vitamin A in PGB-250 is protected from air and the destructive action of minerals by the use of fat, gelatin, and edible food-grade antioxidants. Even at 100 F. and 58% relative humidity in mineral pre-mix, PGB-250 has shown a potency loss of only about 1¼% per week.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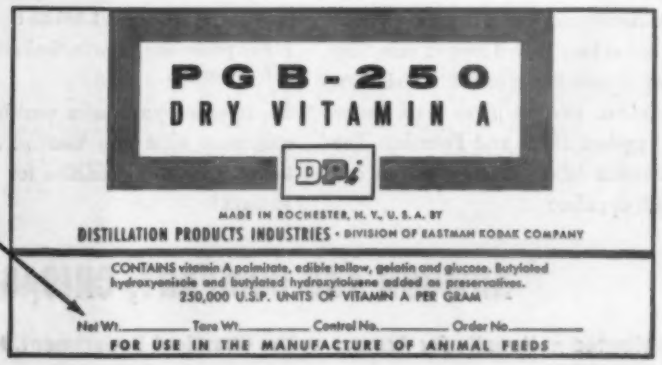
FOR USE IN THE MANUFACTURE OF ANIMAL FEEDS

The vitamin A potency of PGB-250 is 250,000 units per gram. You can also get potencies of 30,000, 20,000, or 10,000 units per gram. The diluent used in these dilutions is solvent-extracted soybean feed of particle size range especially chosen to blend with PGB-250.

PGB-250 Dry Vitamin A is packed in 25-pound and 100-pound polyethylene-lined fibre drums. For further information or a quotation, write ***Distillation Products Industries,*** Rochester 3, N. Y. Sales offices: New York and Chicago • Charles Albert Smith Limited, Montreal and Toronto. (Also available from distributors throughout the country.)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FOR USE IN THE MANUFACTURE OF ANIMAL FEEDS

JOE BROOKS

BY AL P. NELSON

Never Overlook Good Ideas

It was one of those warm late June days when the humidity was high and not a breeze was stirring. After the evening meal, Joe and Mary sat in the breezeway to cool off, before tackling the job of washing dishes. The twins were playing ball in a vacant lot with some of their noisy playmates.

"Joe," said Mary suddenly. "How would you like to sell our home and build a new tri-level home west of town in the Happiness Park area?"

"What! And leave this beautiful, comfortable two story colonial home we've been living in all these years? It may be old fashioned, but darn it, I like it."

Joe was really worked up and any after dinner lethargy which he had nursed was now shaken out of him.

Mary laughed. "I knew you would act that way. I would have bet $100 on it, Joe."

He looked suspiciously at her. "Now, Mary, what are you up to? Are you baiting me?"

Mary brushed back a lock of brown hair. "No, not exactly, but a woman has intuition you know. What I was emphasizing, my dear, to you is how powerful a force habit is. You act as though we couldn't be happy living in any other house than this. And that, you very well know, is silly."

Joe bristled. "It is not silly. It--" he broke off. "I get your point. You mean I'm getting stubborn. I'm conservative. I'm a status quo fellow. I want the world to stand right where it is. I don't want change. I'm satisfied with what I've got."

Mary nodded. "We are all that way once in a while, dear. Perhaps we can afford to be like that in our personal lives, but not in business."

"No," Joe agreed, "in business you have to be alert to trends."

Mary smiled. "Now you are thinking right. Let me put it this way—you are well satisfied with your advertising program. You think that your weekly newspaper ad, your billboards, your monthly mimeographed bulletin to 450 farmers, and your radio weather news and trading post programs are doing a wonderful job for you, don't you?"

Joe bristled again. "Well, aren't they?"

"You tell me they do. And I suppose you might say you do more advertising than the average custom mill and farm store operator. But I think you could get more business."

Joe crossed his legs, and said, "Woman, you are exasperating. Now tell me, how do you think I could get more business?"

Direct Mail

"By doing some additional direct mail advertising."

"In addition to what I am now doing?" Joe was incredulous.

Mary nodded sweetly. "Yes. Let me get something and show you."

She went into the living room, came back a little later with an envelope. "Joe, do you remember when we attended that feed trade convention in Chicago three years ago?"

Joe smiled. "Yes, we really had a good time, didn't we? And I learned something for my business, too. But you sure bought too much stuff. The trunk of the car was loaded with it."

Mary smiled. "Well, you can't expect a woman to shop the big Chicago department stores without buying something. It's a big temptation, you know."

"I suppose so. You even ordered something additional when you got back home."

Mary smiled very prettily. "That's what I did. They got my name and I've been on their mailing list ever since."

"Yeah, and you're sending them an order now and then. I see an awful lot of cancelled checks made out to that Chicago store."

Mary handed him the envelope. "Joe, and you are going to cash in on that mailing list idea—if you aren't too old to change your thinking."

"You insult me!"

"We'll see. I get a mailing like this every month from the city store, Joe. It's on the bulk mailing rate. And, look, there are 12 separate direct mail slips in that one envelope—each advertising a different product or service."

"Twelve—in one envelope!"

Mary nodded. "Certainly. Here's one on a face blemish cream, another on a special deodorant. Here's a shower spray attachment, an out-

DYNAFAC

makes the difference...

in your feed sales, too!

Each day, more and more feeders are demanding DYNAFAC PREMIX in their feeds. They want every bit of advantage that modern agricultural science can offer—not just *some* of it!

Regularity of dynafac performance is practically unique. The word is spreading . . . feeder to feeder; success stories are appearing continuously in the farm press and radio; in college reports from all parts of the nation — DYNAFAC PREMIX makes a good feed better!

Feeders have discovered that DYNAFAC PREMIX helps produce beef at new record lows in cost/100 lbs. of gain. They've seen living proof in their own feedlots that DYNAFAC PREMIX gives them better protection, too, against Bloat and Founder. The *new* DYNAFAC PREMIX label lists *results you can expect to get* with dynafac:

SWINE:

1. For promoting growth and feed conversion.
2. For the control of scours of bacterial origin.

CATTLE AND CALVES:

1. For promoting growth, feed conversion, bloom, and on full feed earlier.
2. As an aid in minimizing the occurrence of feed lot bloat due to high consumption of concentrate.
3. As an aid in minimizing the occurrence of feed lot founder due to high consumption of concentrate.

LAMBS:

1. For promoting growth, feed conversion and on full feed earlier.

So, improve your sales position by giving your customers what they want . . . the leading, most talked about feed additive for 1959 . . . DYNAFAC PREMIX!

ARMOUR AND COMPANY, CHICAGO, ILLINOIS

Dynafac Premix is distributed nationally for Armour by the Chemical Department, McKesson & Robbins, Inc.

Make Your Customers GOOD Customers... all year 'round

SUPREME Brand Condensed BUTTERMILK

HERBERT K. CLOFINE, Inc.
MILK PRODUCTS
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This 100 pound container of

PREMIX

hetrogen K®*

Menadione Sodium Bisulfite

will provide positive vitamin K fortification to 400 tons of your poultry feed for only 4½c per ton

Hetrogen K provides rapid, highly effective protection against hemorrhagic disease. It is the best buy for convenient Vitamin K fortification of your poultry feeds. Assured maximum stability. Economically priced, too! Also recommended for medication of drinking water, Hetrogen K is available as a free flowing concentrate. Write for full data.

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* U.S. Patents 2,331,808 & 2,367,302

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TRIANGLE BRAND
COPPER SULFATE

in your feed helps you raise healthier cattle, hogs, and poultry... it aids in sound growth, efficient breeding performance, normal bone formation, activation of enzymes, maintenance of haircoat color and prevention of anemia.

Follow a mineral feeding program for better cattle, hogs, poultry—*and profits!*

Insist that Triangle Brand Copper Sulfate be included in your regular feedstuff mixture.

PHELPS DODGE REFINING CORPORATION
300 Park Avenue, New York 22, N. Y.

★ Buy and Sell Through WANT ADS ★

SELLIN' SAM — **By Jim Zilverberg**

"I sent them out to be re-upholstered!"

door, foldup table, a moth repellent, a feminine syringe, a rent-a-car ad, perfume specials, a nail glace kit, a toilet kit, a bath salt, a nutrient cream. Joe, I'm ashamed to admit I look forward to receiving this envelope every month, and I'm almost afraid to open it. I know I'll find two or three things in it I'm tempted to buy."

Joe frowned. "Oh, I suppose all women are like that. But, Mary, what has all this got to do with my feed business?"

"What has it got to do with your feed business? Why, Joe, you can have advertising slips like this printed and mailed bulk at low cost. One slip can tell farmers about your grind and mix service, another the mobile service, another your bulk service. Then you can use a slip for each of the various feeds you make under your own label. Why every product you make or sell, Joe, can be advertised on a separate slip—12 in one mailing. Then you can have one master reply card which farmers can check what they want and mail to you."

Joe began to blink as the meaning of Mary's suggestion came home to him. "You mean, I could use this idea to punch my sales ideas across to farmers, and not bunch all the sales suggestions together like I do in my newspaper ads?"

"That's it. Continue to use your advertising, but try this direct idea, too. The paper used is very thin, machine finish stuff. It's printed on both sides. You can use a lot of copy and cuts. Maybe your suppliers will furnish you with mailing material your envelope size. That would cut down on costs."

Joe began to chuckle. "Mary, the idea does appeal to me. I'm willing to try it. In fact, I'm getting a little excited about it. No competitor is using such an idea. And the department stores wouldn't do this sort of thing if it didn't pay. Don't say I'm so conservative I can't change, Mary."

Mary leaned closer. "I'm glad you're not so habit bound in business that you resist new ideas. But there is one thing in which I want you to be habit-bound." She closed her eyes and puckered her lips slightly.

"Oh," said Joe, "I get the idea, honey. Who cares if the neighbors are watching?"

ISOLATE FOOT ROT

LAFAYETTE, IND. — Sheep and cattle affected with foot rot should be isolated from the remainder of the herd, according to Purdue University veterinarians. Diseased animals can contaminate lots and pastures thereby exposing other animals.

STILL ON THE ADVANCE...
THE B&L COMPLETE MOBILE FORMULA FEED BLENDER
Offering Unmatched Maneuverability and Ease of Operation!

B&L

Here's the modern mobile feed plant that grinds, mixes, and blends — produces any formula feed right at the barn door. It carries a full day's supply of molasses and supplement, and features micro-ingredient supplement and medicant mixing . . . high speed molasses blending. Top quality feeds from farm grains and roughages.

STANDARD EQUIPMENT ON THE B&L FORMULA FEED BLENDER — The first practical mobile baled hay grinder grinds round and square bales with equal ease.

• GRINDS WHOLE BALES WITH NO EFFORT • LARGE FEED TABLE — 30" ABOVE GROUND • POWER DRIVEN GATHERING FINGERS • VARI-SPEED FEED DRIVE • COMPLETELY ENCLOSED WHEN NOT IN USE • NO EXTRA POWER NEEDED • UTILIZES FULLEST EQUIPMENT EFFICIENCY

BACKED BY MORE THAN 100 YEARS EXPERIENCE IN FEED AND GRAIN PROCESSING MACHINERY

BARNARD & LEAS Manufacturing Company INC.
1219 Twelfth Street S.W. EMpire 5-1481 Cedar Rapids, Iowa

Fleischmann's F·I·D·Y
IRRADIATED DRY YEAST
RICH IN VITAMIN D

"Trained Ful-O-Pep men are helping dealers make the switch to bulk feeds,"

says **G. P. MOSELEY,** *Manager of Southern Feed Division of The Quaker Oats Company, in this report to Ful-O-Pep Feed Dealers*

G. P. MOSELEY started 22 years ago as an office boy in the Memphis Feed Plant of The Quaker Oats Company. Advancing through the Feed Sales Department, he was promoted to District Manager in 1953 and Manager of Ful-O-Pep's Southern Feed Division in 1956.

"We at Quaker take the position that our growth is dependent on the feed dealer. We feel this is largely responsible for the 'member-of-the-family' feeling that exists among our Ful-O-Pep Dealers.

"We are dedicated to providing 'know-how' that helps our dealers meet today's changing conditions. Take the matter of bulk handling of feeds. Here's the way for the dealer to reduce handling costs and speed up service to his customers. Our men are trained to help Ful-O-Pep Dealers finance and install bulk handling facilities, as well as grinding and mixing equipment for combining grain and concentrates. In this way, the dealer puts out a finished feed at a price that is more profitable both to him and the feeder.

"Ful-O-Pep is also counselling dealers on credit, financing, and sales promotion problems. This close association and cooperation between the Ful-O-Pep salesman and the dealer is placing him in a better position to sell and service today's feeders.

"Positive proof that Ful-O-Pep's aggressive dealer development program is paying off is shown by the increased volume of tonnage our dealers are doing each month.

"So come on and join the constantly growing members of the Ful-O-Pep family of dealers and cash in on the opportunities for greater feed sales and profits."

Geo. P. Moseley

FUL-O-PEP FEEDS

made by The Quaker Oats Company

We invite Feed Dealers to visit our modern Feed Mills located at: Cedar Rapids, Ia. Memphis, Tenn. • St. Joseph, Mo. • Sherman, Tex. • Shiremanstown, Pa. • Lawrenceburg, Ind. • Chattanooga, Tenn. • Tampa, Fla. • Asheville, N. C. • Jasper, Ala.

WORTH LOOKING INTO

NEW PRODUCTS • NEW SERVICE • NEW LITERATURE

DESCRIPTIONS OF NEW AND IMPROVED PRODUCTS AND SERVICES PROVIDED BY MANUFACTURERS AND SUPPLIERS ARE PRESENTED IN BRIEF FORM. FOR ADDITIONAL INFORMATION, PLEASE USE THE ACCOMPANYING COUPON.

No. 7596—Feed, Fertilizer Body

A combination bulk feed and fertilizer body called the "Feedilizer," has been introduced by Simonsen Manufacturing Co. The 3,800-lb., all-steel body can give the dealer an extra fertilizer spreader during the rush season and it also can allow the dealer to expand his operation from the relatively short fertilizer spreading season to a full 12 months by adding bulk feed delivery, the company said. The Feedilizer is two complete bodies in one, with a total capacity of 261 cu. ft. The two com-

partments will hold 8½ tons of fertilizer or 5.2 tons of feed. This allows splitting a load into two separate orders of fertilizer at a time or separate feed orders. One compartment can be filled with fertilizer and the other with feed. The unit has all the features of a bulk feed body and a spreader. Its feed delivery auger will reach 21 ft. bins, will turn 360° and will deliver feed at the rate of 800 lb. a minute. Each conveyor has an individual motor, and the floor conveyor's variable speed drive enables the operator to avoid jamming material in the vertical conveyor. The hydraulic drives eliminate the need for shear pins, slip clutches, long drive lines and gear boxes. Augers can be operated individually. The fertilizer spreader unit is designed to spread accurately down to 75 lb. an acre. Because its apron is run by a wheel drive, the truck can be operated in all gears or with a two-speed axle without affecting the rate of fertilizer spread. Stainless steel is used at all critical points to reduce corrosion. For more information, check No. 7596 on the coupon and mail.

No. 7600—Fish Meal Dryer Bulletin

An eight-page bulletin describing a low temperature fish meal dryer has been released by Standard Steel Corp. The publication includes photographs of dryer installations and auxiliary control equipment, a flow diagram of the rotary drying operation, description of the Standard fish meal drying method and design data. Company literature claimed higher protein value and greater yield are gained through the use of the dryer and a meal is produced that is light in color and easily packed. For copies, check No. 7600 on the coupon and mail.

No. 7597—Tractor Shovel

A four-wheel-drive, rubber-tired tractor shovel with 5,000 lb. carrying capacity has been announced by the Frank G. Hough Co. Features of the unit, designated Model H-50, include more power available for

both hydraulics and traction, more efficient torque-converter, complete power-shift transmission, power-transfer differentials, power-steering, pry-out bucket action, safety boom arms, power-boosted brakes and numerous refinements, company literature claims. The gasoline and diesel engines provide from 90 to 92 h.p. The unit has a large capacity oil-bath air cleaner, a cartridge-type oil filter that is built into the hydraulic reservoir and similar filters for engine, transmission and torque-converter oil. The torque-converter is a single-stage, two-phase converter with a torque-multiplication factor of 2.57 to 1 at stall. For complete details, check No. 7597 on the coupon and mail.

No. 7598—All-Steel Hog Pen

Development of a four-purpose, all-steel hog pen has been announced by Starline, Inc. According to the company, the pen enables raisers to use a single hog house through the entire swine life cycle. Flexibility has been accomplished by eliminating concrete curbs and by designing the pens with

removable farrowing crate rails and pen partitions. The basic hog pen is formed of panels standing approximately 37 in. high, with 5 in. spindle spacing in the upper section and 2½ in. spacing below. A standard 24 in. gate is located in the center of the pen partition on the alley side. This center location of the pen gate makes it possible to convert the pen to a farrowing crate, the company says. It can be changed to a pig creep from the farrowing crate by removing the restraining bar. Check No. 7598 on the coupon and mail for details.

No. 7599—Vitamin K Product

The Heterochemical Corp. announces that it is making generally available to the feed industry a range of potencies and carriers of its Hetrogen K Premix (water soluble vitamin K; stabilized menadione sodium bisulfite). The company claims savings for the feed manufacturer in both cost and more efficent vitamin K utilization. The firm listed various potencies, ranging from 4 to 64 gm. per pound, using either a calcite carrier or a soybean meal carrier. In connection with the calcite premix, the firm said it has been using for some time a new method of manufacture which results in a "completely stable product." Further information may be obtained by checking No. 7599 on the coupon and mailing it.

No. 7601—Dust Collector

Ripco Air Systems has introduced a compact dust collector to be used with its pneumatic bulk loading and unloading systems. Designed primarily for use when unloading bulk feed into open bins, hog feeders and so on, the unit, through a swirling action, separates air from the grain, dripping the grain by gravity and allow-

ing the dust-free air to escape through the opening in the top. The unit measures 14 in. in diameter and 16 in. deep and can be carried in the truck on all trips. Literature is available by checking No. 7601 on the coupon and mailing to this publication.

Also Available

The following new products have been described in previous issues of Feedstuffs and information about them may still be obtained by jotting the appropriate number on the coupon and forwarding it to Feedstuffs.

No. 7539—Screen separator bulletin, Southwestern Engineering Co.

No. 7540—Salt box designs, International Salt Co.

No. 7541—Financing, leasing program, Simonsen Manufacturing Co.

No. 7542—Bulk feed handler, Productive Acres Manufacturing Co.

No. 7543—High-speed blender, Strong-Scott Manufacturing Co.

No. 7544—Dual roll drive, Moore Dry Dock Co.

No. 7545—Pneumatic vibrator, Cleveland Vibrator Co.

No. 7546—Barge unloading conveyor, Andrews Machine Co.

No. 7547—Bulk feed unit, Ripco, Inc.

No. 7548—Electronic weight detector, Fairbanks, Morse & Co.

No. 7549—Equipment catalog, Burrows Equipment Co.

No. 7550—Moisture computer, F. H. Peavey & Co.

No. 7551—"Dual-Speed" pellet mill, California Pellet Mill Co.

No. 7552—Mixer data sheet, Munson Mill Machinery Co.

No. 7553—Auger elevator, Koyker Manufacturing Co.

No. 7554—Bulk scale bulletin, Richardson Scale Co.

No. 7555—Surge bin, Rapids Machinery Co.

No. 7556 — Equipment catalog, Seedburo Equipment Co.

No. 7557 — Service plan brochure, Wm. Davies Co., Inc.

No. 7558 — Batch mixer bulletin, Gruendler Crusher & Pulverizer Co.

No. 7559—Grain drying bin, Lennox Industries, Inc.

No. 7560 — Gluten feed booklet, Corn Industries Research Foundation, Inc.

No. 7561—Bulk material transport, Dorsey Trailers.

No. 7562—Mixer-blender, Collision Mixer Co.

No. 7563—Electromagnetic pulley, Stearns Magnetic Products.

No. 7564—Flat belt pulleys, Republic Engineering & Manufacturing Co.

No. 7565 — Coded card control, Richardson Scale Co.

Send me information on the items marked:

—

☐ No. 7596—Feed, Fertilizer Body
☐ No. 7597—Tractor Shovel
☐ No. 7598—All-Steel Hog Pen
☐ No. 7599—Vitamin K Product
☐ No. 7600—Fish Meal Dryer Bulletin
☐ No. 7601—Dust Collector

(PLEASE PRINT OR TYPE)

Others (list numbers) .....

NAME .....

COMPANY .....

ADDRESS .....

——— SLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL ———

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BUSINESS REPLY ENVELOPE
No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY—

Feedstuffs

P. O. Box 67

Reader Service Dept. Minneapolis 40, Minn.

No. 7566—Creep feeder, National Manufacturing & Stamping Co.
No. 7567—Fabricated roof, Butler Manufacturing Co.
No. 7568—Vitamin A, Distillation Products Industries.
No. 7569 — Portable grain auger, Viking Manufacturing Co.
No. 7570—Protein analyzer, Hegman, Inc.
No. 7571—Cob and shuck retarder, C. O. Bartlett & Snow Co.
No. 7572—Pneumatic bulk unit, Aero-Bulk Manufacturing Co.
No. 7573—Linear programming, International Business Machines Corp.
No. 7574 — Temperature recording unit, Hot Spot Detector, Inc.
No. 7575 — Automatic bag feeder, Bemis Bro. Bag Co.
No. 7576—"Roughager" pellet mill, California Pellet Mill Co.
No. 7577—Bulk fumigant, Ferguson Fumigants, Inc.
No. 7578—Extractor magnet, Magni-Power Co.
No. 7579—Proportioning pump, B-I-F Industries, Inc.
No. 7580—Booklet on pellet mills, Sprout, Waldron & Co., Inc.
No. 7581 — Automatic unloader, Butler Manufacturing Co.
No. 7582 — Molasses feed scale, Richardson Scale Co.
No. 7583—Bin vibrator, Eriez Manufacturing Co.
No. 7584 — Dealer program brochure, William Davies Co., Inc.
No. 7586—Engineering service, V. D. Anderson Co.
No. 7587—Inert atmosphere generators, Gas Atmospheres, Inc.
No. 7588—Molasses product, Vy-Lactos Laboratories, Inc.
No. 7589—Bulk feed body, Gerber Sheet Metal, Inc.
No. 7590—Bulk or feed body, Trailco Manufacturing & Sales Co.
No. 7591—Sales booklet, Perrygraf Corp.
No. 7592—Package Pneumatic system, Sprout, Waldron & Co., Inc.
No. 7593—Bag flattener, New London Engineering Co.
No. 7594—Vitamin K product, Abbott Laboratories
No. 7595—Portable grain conveyor, Myers-Sherman Co.

Prospects for Cattle Profits Said Good

AMES, IOWA — Immediate profit prospects for Iowa cattle growers continue to be favorable, even though the long-range cattle outlook isn't so rosy, according to Francis Kutish, Iowa State University farm economist.

The 1959 fed cattle prices aren't likely to break drastically since marketings of other than fed cattle probably will remain small this year, Mr. Kutish says.

"Marketings this summer and fall are expected to be around 8% larger than a year ago," according to Mr. Kutish, "but they're being dragged out as cattlemen feed cattle to heavier weights. Cattle raisers continue to hold back cows and other nonfed cattle which would otherwise seriously depress market prices.

"Cattle feeding profits aren't as great this year as a year ago, but they're high enough to keep the interest in cattle feeding—particularly in view of bumper crop prospects," he says.

"The biggest uncertainty in the short-run cattle price outlook is the weather. Unfavorable weather in the West could change the summer and fall picture considerably. If moisture shortages occur in these western regions, the lack of range feed would be felt keenly. This is especially true with the high number of cattle now available," he adds.

Firm Names Manager

BATESVILLE, ARK.—A new general manager was named as the Arkansas Poultry Co., Batesville, resumed operations after being idled by a strike since June 26.

Glen Hinkle, Mountain View, Ark., said recently that Holly Hipps, Aurora, Mo., has been named manager of the plant to succeed Lacy Hubbard. Mr. Hubbard's future plans were not disclosed.

The plant processes, freezes and distributes poultry.

Shellbuilder Is Worth Reaching For
Shellbuilder Company
Melrose Building • Houston, Texas
the finest in pure crushed reef oyster shell.

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Serving Mills & Breeders For Over 30 Years
Devolkod ® Vitamin Oils (Fortified Cod Liver Oils)
Devolkod ® Non-Dest. Cod Liver Oil U.S.P.
Devold Vitamin A & D Feeding Oils
Devold Vitamin A Oils
Peder Devold Wheat Germ Oil
"Stabilized" From Can to Carloads
ORegon 9-8400
PEDER DEVOLD OIL CO.
Division of Chas. L. Huisking & Co., Inc.
417-FM Fifth Avenue
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Engineered for efficiency and economy
the new AIR UNLOADING
DORSEY BULKMASTER MODEL J-A
FASTER
QUIETER
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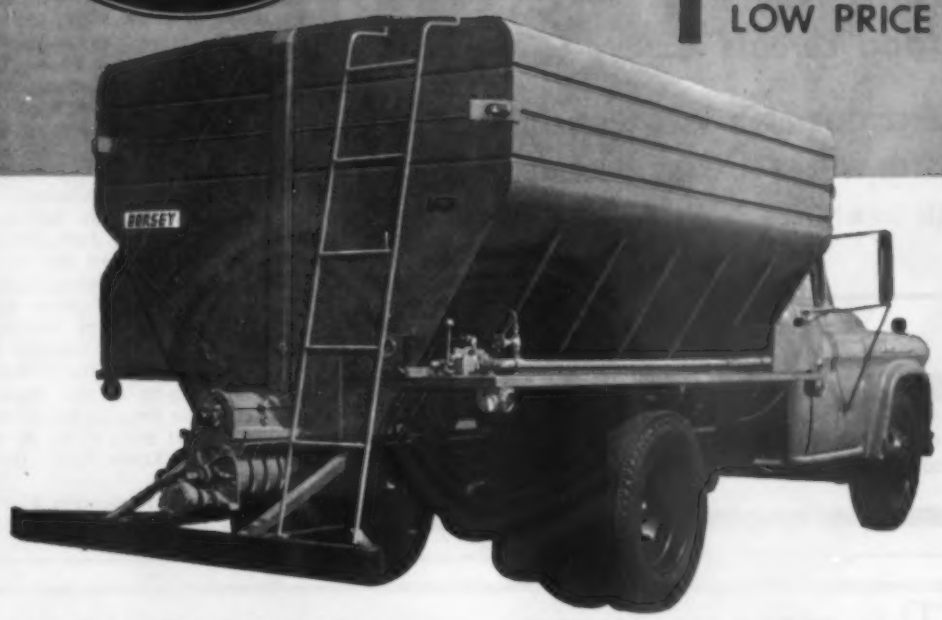

Now, the versatility of air unloading at a new low price! Yet, like all other models in the famous Bulkmaster line, this all-new body is ruggedly built with many quality features for long-lasting, trouble-free service. Large 6″ screw conveyor and specially-designed rotary air lock feeder are hydraulically-powered to allow complete control of feed flow. A new, lightweight blower provides a medium pressure air stream that's quieter than ever before and holds pellet breakage to a minimum! The model J-A is available in lengths from 10 to 16 feet, and as optional, in high-cube design for increased capacities when handling lightweight feeds. Other top-line features include:

- *All-steel, electrically-welded body, ribbed for extra strength*
- *32″ x 32″ sliding hatch covers with foam rubber seals*
- *Rear-mounted throttle*
- *Tachometer*
- *Four 9-foot sections of flexible metal hose*
- *Easily-accessible rear ladder*
- *Automotive-type bumper*
- *ICC lights, rear directionals*
- *Compartments*

For the full facts on the J-A, see your Dorsey Bulkmaster distributor or MAIL THE COUPON

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DORSEY TRAILERS
ELBA, ALABAMA

DORSEY TRAILERS
Elba, Alabama
RUSH literature on the all-new Model J-A
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COMPANY_____
ADDRESS_____
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Yes!
He's looking for some of your dog food made with our complete dog food cereals
★ TOASTED CORN FLAKES
★ KIBBLED CORN
★ TOASTED WHEAT FLAKES
★ KIBBLED WHEAT
★ CORN GRANULES
★ KIBBLED PREMIXES
(Straight or Mixed Shipments)
Carloads — Truckloads — LCL — LTL
LAUHOFF GRAIN COMPANY
PHONE 1800
Cereals of Quality Since 1862
Danville, Illinois
TELETYPE 8261

Convention Calendar

Aug. 3-8—Feed Microscopy Short Course; Texas Agricultural Experiment Station, College Station; chm., E. E. Brown, Asst. State Chemist.

Aug. 4-6—Midsouth Soybean and Grain Shippers Assn.; Hotel Peabody, Memphis, Tenn.; sec., Paul C. Hughes, P.O. Box 692, Blytheville, Ark.

Aug. 4-7 — Poultry Science Assn. (meeting for members and executive committee invited guests only), Iowa State College, Ames; chm., Dr. Robert E. Phillips, poultry department, Iowa State College.

Aug. 7-8 — North Carolina Feed Manufacturers Assn.; Ocean Forest Hotel, Myrtle Beach, S.C.; sec.-treas., A. M. Upshaw, Jr., North Carolina Feed Manufacturers Assn., Box 44, Mocksville, N.C.

Aug. 10-12 — American Soybean Assn. and National Soybean Processors Assn., joint convention; Sheraton-Jefferson Hotel, St. Louis, Mo.; exec. vice president, George M. Strayer, American Soybean Assn., Hudson, Iowa; sec., National Soybean Processors Assn., R. G. Houghtlin, 3318 Board of Trade Bldg., Chicago 4, Ill.

Aug. 11-12 — Wisconsin Nutrition School; Memorial Union, University of Wisconsin, Madison; chm., Dr. Robert H. Grummer, Dept. of Animal Husbandry, University of Wisconsin.

Aug. 17-18 — Kentucky Feed Conference, sponsored by University of Kentucky and Kentucky Feed & Grain Assn.; Brown Suburban Hotel, Louisville; sec., Jack Weber, P. O. Box 425, Lexington, Ky.

Aug. 23-25—Poultry Industries of Louisiana, Inc.; Captain Shreve and Washington Youree Hotels, Shreveport; sec., Clyde Ingram, Louisiana State University, Baton Rouge, La.

Aug. 23-25 — The National Hay Assn.; Sir Francis Drake Hotel, San Francisco; sec., Fred K. Sale, 600 Board of Trade Bldg., Indianapolis, Ind.

Aug. 24-27—Georgia Poultry Institute; Rock Eagle 4-H Club Center; Eatonton, Ga.; chm., Arthur Gannon, Poultry Division, University of Georgia, College of Agriculture, Athens, Ga.

Aug. 28—Purdue Swine Day; Purdue University, Lafayette, Indiana; chm., Dr. J. H. Conrad, Animal Science Department.

Sept. 3-4—Symposium on Magnesium in Agriculture; West Virginia University, Morgantown, W. Va.; Dr. G. C. Anderson, head, Animal Husbandry Dept.

Sept. 4 — Illinois Cattle Feeders Day, University of Illinois, Urbana; chm., A. L. Neumann, Beef Cattle Division.

Sept. 4—Swine Day; University of Missouri, Columbia; chm., Prof. Leland Tribble, Animal Husbandry Department.

Sept. 9-10 — Pet Food Institute, Drake Hotel, Chicago; sec., Clyde Kassens, 332 S. Michigan Ave., Chicago, Ill.

Sept. 9-10 — Maryland Poultry Service Conference; University of Maryland, College Park; chm., Wade H. Rice, University of Maryland, College Park, Md.

Sept. 9-17 — Illinois State Turkey Growers Assn., farm of Clarence Ziemer, Elmwood, Ill.; sec., S. B. Swann, Kauffman Turkey Farms, Waterman, Ill.

Sept. 13-14—Grain and Feed Dealers National Assn. (work meeting for directors, committees and members), Minneapolis; exec. vice pres., Alvin E. Oliver, 400 Folger Bldg., Washington 5, D.C.

Sept. 15-16—Mutual Millers & Feed Dealers Assn.; Jamestown, N.Y.; sec., Margaret Bentley, 41 Chautauqua Ave., Jamestown, N.Y.

Sept. 15-17—Dixie Poultry Exposi-

New Listings

For the convenience of readers who scan the Convention Calendar regularly for new listings, those added to the column in the current week appear separately from ones which have been entered previously. The following week they will be moved to their proper slot where they will remain until the event is held.

● ● ●

Oct. 1-2—National Feed Ingredients Assn.; Pick-Congress Hotel, Chicago, Ill.; sec. Peter W. Janss, 212 Equitable Bldg., Des Moines, Iowa.

Nov. 16—Tennessee Feed Manufacturers Assn., Claridge Hotel, Memphis, Tenn.; sec., Charles H. Warfield, American Trust Bldg., Nashville, Tenn.

1960

Jan. 5-7—National Turkey Federation; Hotel Leamington, Minneapolis; sec., M. C. Small, P. O. Box 69, Mt. Morris, Ill.

April 11-13—Poultry and Egg National Board, LaSalle Hotel, Chicago, Ill.; mgr., Floyd Gell, 8 S. Michigan Ave., Chicago 13, Ill.

This MOLASSES MIXER never NEEDS CLEANING!
Hundreds of satisfied users know that SECO's twin rotors, with paddles that clean each other, end all cleaning and scraping forever! And the SECO TWIN brings you these features too:
Dual rotary action that assures uniform mixing
Molasses never has to be heated
Separate molasses pump and variable-speed auger feeder
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coxy protection in all kinds of weather...
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broiler starter and grower rations.
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CALENDAR FOR 1959-60

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tion; Asheville, N.C.; sec., N. B. Nicholson, Monroe, N.C.

Sept. 16-18—National Feed Ingredients Assn.; Pick-Congress Hotel, Chicago, Ill.; sec., Peter W. Janss, 212 Equitable Bldg., Des Moines, Iowa.

Sept. 17-18 — Arkansas Formula Feed Conference; University of Arkansas, Fayetteville; chm., Dr. E. L. Stephenson, Department of Animal Industry.

Sept. 18 — College-Feed Industry Conference; Iowa State College, Ames; chm., Prof. Emmit Haynes, Animal Husbandry Dept.

Sept. 23 — Vermont Feed Dealers and Manufacturers Assn.; University of Vermont, Burlington, Vt.; sec., D. C. Henderson, Hills Agricultural Science Building, Burlington, Vt.

Sept. 23-25 — Feed Production School; Continental Hotel, Kansas City; sponsored by Feed Production School, Inc.; pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Sept. 24-26 — Pennsylvania Millers & Feed Dealers Assn.; Yorktowne Hotel, York, Pa.; sec., Donald W. Parke, P.O. Box 329, Ephrata, Pa.

Sept. 26—Small Mill Short Course; Continental Hotel, Kansas City; sponsored by Feed Production School, Inc.; pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Sept. 29-30 — Pacific Northwest Garden Supply Trade Show; Masonic Temple, Portland, Ore.; mgr., Russ Hays, 702 Lewis Bldg., Portland, Ore.

Oct. 6-8 — Northeastern Poultry Producers Council Exposition and Convention; Farm Show Building, Harrisburg, Pa.; chm., Alfred Van Wagenen, 10 Rutgers Place, Trenton 8, N.J.

Oct. 7-9—Texas Nutrition Conference; Texas A&M College, College Station; chm., Dr. J. R. Couch, Department of Poultry Science.

Oct. 11-14—Kentucky Poultry Federation and Kentucky Poultry Improvement Assn.; Cumberland Falls State Park, Corbin; sec., John W. Tuttle, 730 Rose St., Lexington, Ky.

Oct. 14 — Animal Nutrition Research Council; Shoreham Hotel, Washington, D.C.; sec., Irwin Olcott, Dawe's Laboratories, Inc., 4800 S. Richmond St., Chicago 32, Ill.

Oct. 14-15—Association of American Feed Control Officials; Shoreham Hotel, Washington, D.C.; sec., Bruce Poundstone, Agricultural Experiment Station Bldg., University of Kentucky, Lexington, Ky.

Oct. 15-16—Michigan Feed & Grain Dealers Assn.; Kellogg Center, Michigan State University, East Lansing, Mich.; sec., Nevels Pearson, P.O. Box 472, East Lansing, Mich.

Oct. 15-16 — West Virginia Feed Dealers Assn. convention; Blackwater Falls Lodge, Davis; sec., J. S. Larrick, Beckley Ice & Feed, Beckley, W. Va.

Oct. 19-20—Beef Research Conference (attendance by invitation); Purdue University, Lafayette, Ind.; sponsored by Agricultural Research Institute and National Academy of Sciences-National Research Council; Dr. C. B. Cox, Agricultural Economics Department, Purdue University.

Oct. 19-20—California Animal Industry Conference; Fresno Memorial Auditorium, Fresno, Cal.; sponsored by California Hay, Grain & Feed Dealers Assn. and University of California; chm., Berton Maxwell, Poultry Producers of Central California, Petaluma.

Oct. 20-21—Virginia State Poultry Federation; Hotel John Marshall, Richmond, Va.; sec., J. Paul Williams, 615 E. Franklin St., Richmond 19, Va.

Oct. 22-23 — Annual Stockholders Meeting, Cooperative G.L.F. Exchange, Inc., Onondago County War Memorial Building, Syracuse, N.Y.

Oct. 22-23 — Iowa Seed Dealers Assn.; Savery Hotel, Des Moines; sec., Bob Skinner, 928 Des Moines Bldg., Des Moines 9, Iowa.

Oct. 29—Nebraska Feed & Nutrition Conference; University of Nebraska, Lincoln; chm., Dr. John Adams, Poultry Husbandry Department.

Oct. 30—Rooters Day; University of Nebraska, Lincoln; Dr. E. R. Peo, Animal Husbandry Department.

Oct. 30 — Illinois Sheep Producers Day; University of Illinois, Urbana; chm., Dr. U. S. Garrigus, Department of Animal Science.

Nov. 4-5—Illinois Feed Assn. and Illinois Poultry Improvement Assn., joint convention; Armory, Springfield, Ill.; IFA, Leland Hotel; sec., Dean M. Clark, Board of Trade Bldg., Chicago; IPIA, St. Nicholas Hotel; sec., Aubrey Harless, Box 91, Shelbyville, Ill.

Nov. 4-7 — National Renderers Assn., Hollywood Beach Hotel, Hollywood Beach, Fla.; sec., Miss Jamie

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FORSTER WEIGH BUGGY

FOR ACCURATE MIXING
Use the Forster Weigh Buggy to improve mixing accuracy . . . to save labor . . . to save time . . . for weighing, hauling, and dumping. Features accurate beam scale and sliding panel in bottom for dumping. Write for complete details, today.

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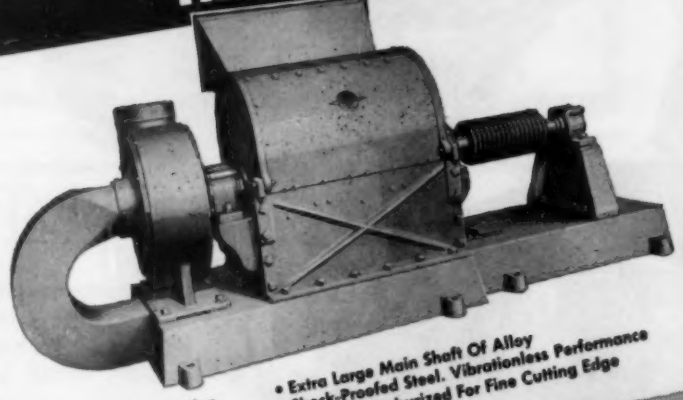

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Company Name.....

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Fit the protection to the problem— with versatile, unmatched nf-180

Nothing protects turkeys during the critical growing-finishing period like nf-180. It prevents and controls more turkey diseases than any other drug. The comparison chart below proves it.

With nf-180 you can tailor medicated feeds to fit your needs. Here are three methods in widespread use:

Two-pound level (.011% furazolidone) — fed continuously to help protect against blackhead, hexamitiasis, and other diseases.

One-pound level (.0055% furazolidone) — fed continuously for wide protection against stress-caused troubles and many diseases, except where blackhead and hexamitiasis are problems.

Week-a-month plan — for areas where disease is not as serious. You feed nf-180 at a 2-lb. (.011% furazolidone) level one week a month to help clean up birds, fight stresses, and knock out disease organisms before they cause trouble.

Compare nf-180 (furazolidone) with other turkey feed medications

DRUG	Growth Stimulation	Typhoid	Pullorum	Paracolon	Paratyphoid	C. R. D. Sinusitis	Blue Comb	Hexamitiasis	Synovitis	Ulcerative Enteritis	Blackhead	Stress periods
*nf-180 (furazolidone)	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Chlortetracycline	YES	NO	NO	NO	NO	YES	YES	YES	YES	NO	NO	YES
Oxytetracycline	YES	NO	NO	NO	NO	YES	YES	YES	YES	NO	NO	YES
Bacitracin	YES	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	YES
Penicillin and Streptomycin	YES	NO	NO	NO	NO	YES	YES	YES	NO	NO	NO	NO
Pencillin	YES	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	NO
12½ Penicillin plus 37½ Bacitracin	YES	NO	NO	NO	NO	YES	YES	NO	NO	NO	NO	YES
Erythromycin Stearate	NO	NO	NO	NO	NO	P-? T-YES	P-? T-YES	NO	P-? T-YES	NO	NO	NO
2—Acetylamino 5—Nitrothiazole	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	P-YES T-YES	NO
4—Nitrophenyl. Arsenic Acid	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	P-YES T-NO	NO
A Sulfa—Tin—Arsenical Comb.	YES	P-? T-NO	P-? T-NO	NO	NO	NO	P-YES T-NO	P-YES T-NO	NO	NO	NO	NO

KEY — P: Prevention T: Treatment *Each pound of nf-180 contains 50 grams of furazolidone

In addition, all three plans help improve feed conversion, step-up growth, and eliminate sub-clinical infections. Buildup of resistant organisms has never been a problem with nf-180—no unwanted side effects because nf-180 is non-toxic.

Why settle for less than nf-180 protection? Review your turkey disease problems, then set up the nf-180 program which will fit your needs. For complete details on nf-180, talk with your Hess & Clark representative, or write, wire, or call for the Turkey Feed Medication Kit to Feed Products Manager, Hess & Clark, Ashland, Ohio.

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brand of
furazolidone

Fox, 30 N. La Salle St., Chicago 2, Illinois.

Nov. 6-7—Oklahoma Formula Feed Conference; Oklahoma State University, Stillwater; chm., Dr. Rollin H. Thayer, Poultry Science Department. Jackson Blvd., Chicago 4, Ill.

Nov. 12-13—Cornell Nutrition Conference; Hotel Statler, Buffalo, N.Y.; chm., Dr. F. W. Hill, Poultry Husbandry Dept., Cornell University, Ithaca, N.Y.

Nov. 19-20—National Swine Industry Conference; Iowa State College, Ames; chm., Keith Myers, National Swine Growers Council, Grundy Center, Iowa.

Nov. 22-24—Western Grain & Feed Assn. of Iowa; Fort Des Moines Hotel, Des Moines, Iowa; sec., Bob Skinner, 928 Des Moines Bldg., Des Moines 9, Iowa.

Nov. 27-28 — American Society of Animal Production; Sherman Hotel, Chicago, Ill.; sec., Dr. H. H. Stonaker, Colorado State University, Ft. Collins, Colo.

Nov. 30-Dec. 1 — Midwest Veterinary Nutrition Conference; President Hotel, Kansas City; sec., Lloyd Larson, Midwest Feed Manufacturers Assn., 20 W. 9th Street Bldg., Kansas City 5, Mo.

Dec. 8-9 — Poultrymen's Service Clinic; Cornell University, Ithaca, N.Y.

1960

Jan. 4-5 — Kansas Formula Feed Conference; Kansas State University, Manhattan, Kansas.

Jan. 17-19—Indiana Grain & Feed Dealers Assn.; Claypool Hotel, Indianapolis, Ind.; sec., Fred K. Sale, 600 Board of Trade Building, Indianapolis 4, Ind.

Jan. 25-27 — Southeastern Poultry & Egg Assn.; Municipal Auditorium, Atlanta, Ga.; sec., Harold E. Ford, 235 E. Ponce de Leon Ave., Decatur, Ga.

Feb. 4-5—Oregon Animal Industry Conference; Oregon State College, Corvallis, Ore.; chm., Dr. J. E. Parker, Poultry Husbandry Department.

Feb. 8-9—Montana Nutrition Conference; Montana State College, Bozeman; chm., Dr. O. O. Thomas, Animal Industry Dept.

Feb. 8-9—Midwest Feed Manufacturers Assn.; Muehlebach Hotel, Kansas City; exec. vice pres., Lloyd Larson, 20 W. 9th St. Bldg., Kansas City 5, Mo.

Feb. 11 — Boston Grain and Flour Exchange Annual Banquet; Sheraton-Plaza Hotel, Boston; chm., Paul Sutliff, 177 Milk St., Boston, Mass.

Feb. 12-14—Fact Finding Conference, sponsored by the Institute of American Poultry Industries; Municipal Auditorium, Kansas City, Mo.; pres., Harold M. Williams, 59 East Madison, Chicago, Ill.

Feb. 21-23 — Ohio Grain & Feed Dealers Assn.; Commodore Perry Hotel, Toledo; sec., G. E. O'Brien, 694 N. Ohio Street, Greenville, Ohio.

Feb. 22-23—Virginia Feed & Nutrition Conference; Hotel Roanoke, Roanoke; J. Paul Williams, sec., Virginia State Feed Assn., 615 E. Franklin St., Richmond, Va., or Prof. Paul M. Reaves, Department of Dairy Science, Virginia Polytechnic Institute, Blacksburg, Va.

March 7-8—Grain & Feed Dealers National Assn.; Hotel Muehlebach, Kansas City; sec., Herbert L. Sharp, 400 Folger Bldg., Washington 5, D.C.

March 17-18—Oregon Feed & Seed Dealers Assn.; New Sheraton Hotel, Portland, Ore.; mgr., Russ Hays, 703 Lewis Bldg., Portland, Ore.

March 23—Distillers Feed Conference; Sheraton Gibson Hotel, Cincinnati; sponsored by Distillers Feed Research Council; exec. director, Dr. Lawrence E. Carpenter, 1232 Enquirer Bldg., Cincinnati, Ohio.

April 21-23—California Hay, Grain & Feed Dealers Assn., Ambassador Hotel, Los Angeles; sec., John Gilmore, Blue Anchor Bldg., 1400 10th St., Sacramento 14, Cal.

April 21-23—Kansas Grain & Feed Dealers Association; Broadview Hotel, Wichita, Kansas; sec., Orris E. Case, 609 Wiley Bldg., Hutchinson, Kansas.

May 9-11—American Feed Manufacturers Assn.; Conrad Hilton Hotel, Chicago; sec., W. T. Diamond, 53 W.

Casco Chemical to Expand Operations

DALLAS—James R. Cash, president of the Casco Chemical Corp., has announced the election of five new members to the board of directors, and expansion plans for the company's foreign and domestic business.

New officials are: William J. Garrett, Dallas, vice president and director to head the firm's financial affairs; Rea H. Allison, New York, director; Charles F. Smith, Dallas, director; Harvey Keyes, Ft. Worth, director and Charles Marcus, Dallas, legal counsel and director.

Casco Chemical, which has been in existence two years, last year had a sales volume of nearly $4 million. The selling pace has been stepped up considerably, Mr. Cash said, as the company is now producing a new liquid antioxidant for the edible and inedible fats industries.

The firm deals in animal fats and oils, vegetable oils and related products. It operates a fleet of 28 tank-type trucks in the southwestern, midwestern and southeastern sections of the U.S. About 20% of the company's sales are to large domestic concerns, and about 80% to foreign markets.

Mr. Garrett said he expected Casco to realize a sales volume of about $10 million in 1959, basing his estimate on first quarter results. He mentioned that the firm is coming out with a new product that resists oxidation and prevents rancidity in fat-containing foods.

Joins Research Council

CINCINNATI — Barton Distilling Co., Bardstown, Ky., recently joined the Distillers Feed Research Council, expanding the council's membership to 22.

Dr. Frank Kraus, vice president of Barton Distilling, was elected to serve on the council's board of directors. Joseph Svihovec will represent the company on the council's research committee.

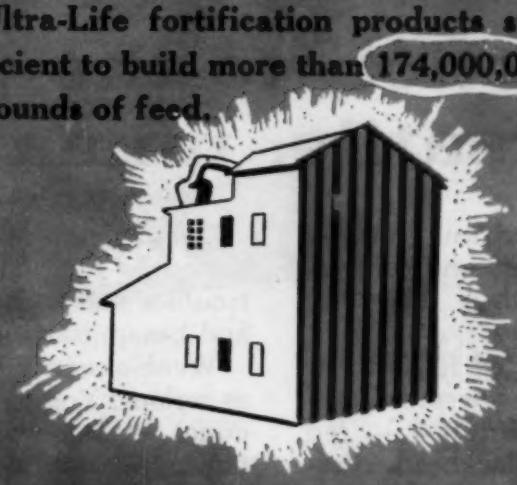
Barton Distilling produces distillers dried grains with solubles, one of the three types of feed ingredients produced by the distilling industry.

STORAGE FACILITIES

BRADY, NEB.—The construction of gas storage facilities at Kaw Dehydrating Co., Brady, was completed recently by Mid-States Construction Co., Omaha.

10 FOLD in 4 Years*

In four years a ten-fold increase for this manufacturer with purchase of Ultra-Life fortification products sufficient to build more than 174,000,000 pounds of feed.



One feed manufacturer bought enough Ultra-Life products in 1955 to manufacture slightly more than 17,250,000 lbs. of finished feed.

Another *Ultra-Lifed* Feed Manufacturer's Success Story!

There are many, many success stories of Ultra-Lifed Feed Manufacturers . . . feed manufacturers who have increased their business constantly, year after year, utilizing Ultra-Life fortification products to build highest quality feeds and the Ultra-Life sales and service programs to sell these feeds.

If you are a feed manufacturer, and desire to build a larger, more profitable business, you need to know the facts of Ultra-Life's complete program. Let us show you how the Ultra-Life Program can work for you, too!

*Name on request

THE ULTRA-LIFE PROGRAM

gives you the highest quality fortification products.

PLUS

- Complete formula and laboratory service, tags and registrations
- Intensive poultry and livestock training schools for your salesmen
- Professional marketing assistance with all advertising materials furnished.

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One of the Country's Oldest and Largest Manufacturers of Vitamin and Trace-Mineral Products

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It will save money for you!

CHANTLAND MFG. CO.

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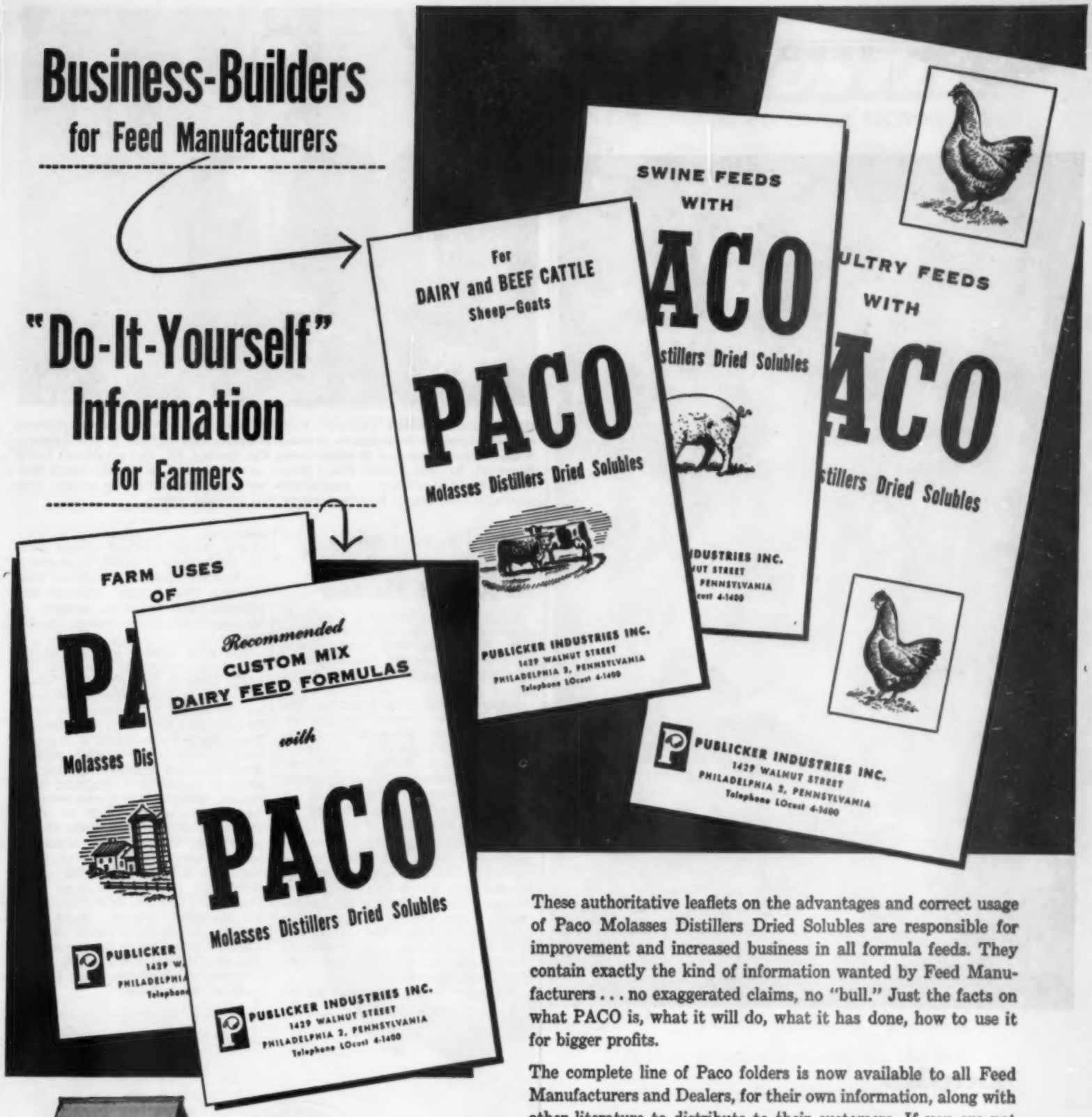
Business-Builders
for Feed Manufacturers

"Do-It-Yourself" Information
for Farmers



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Here is the ideal, fast-selling package for direct sales to farmers and cattlemen.

These authoritative leaflets on the advantages and correct usage of Paco Molasses Distillers Dried Solubles are responsible for improvement and increased business in all formula feeds. They contain exactly the kind of information wanted by Feed Manufacturers . . . no exaggerated claims, no "bull." Just the facts on what PACO is, what it will do, what it has done, how to use it for bigger profits.

The complete line of Paco folders is now available to all Feed Manufacturers and Dealers, for their own information, along with other literature to distribute to their customers. If you are not acquainted with PACO and its many advantages as a fortifier and "freshener" for all types of feeds, we will be pleased to send by return mail the data you check on coupon below.

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- ☐ DAIRY and BEEF CATTLE FEEDS with PACO

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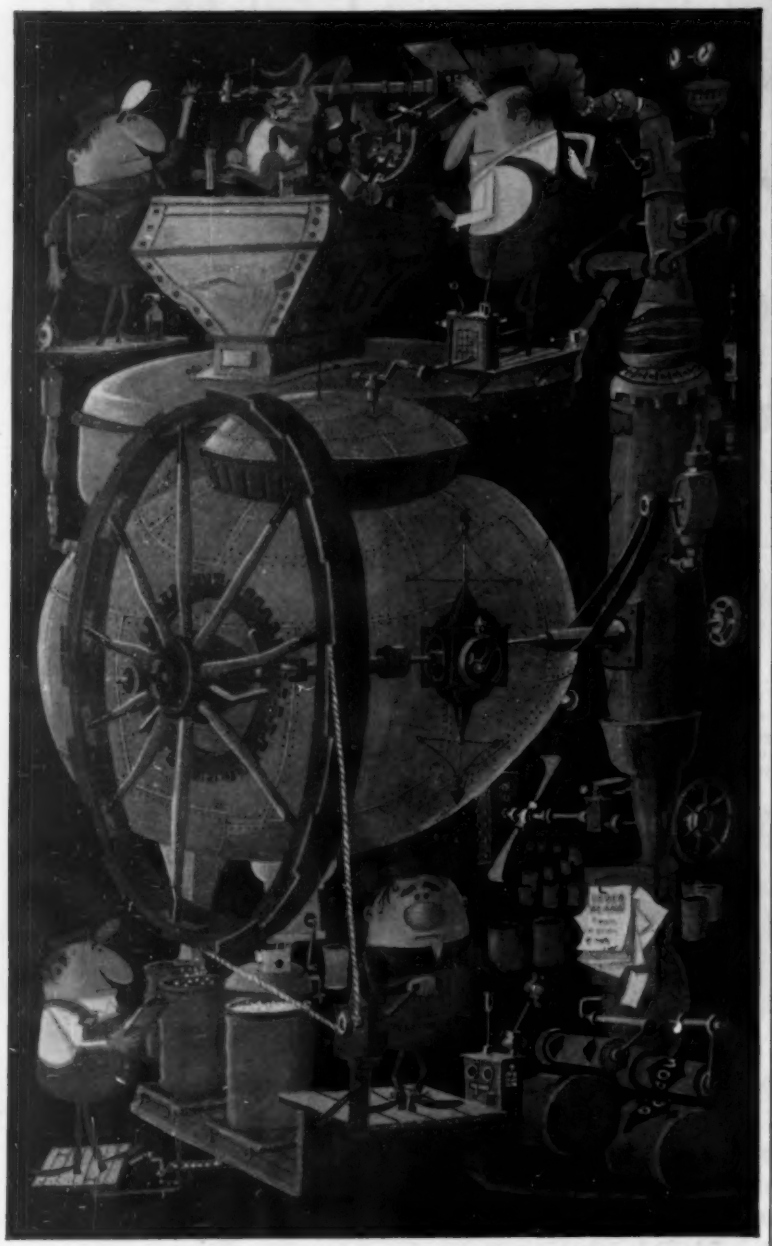

HEAD MICROSCOPY GROUP—New officers elected at the annual meeting of the American Association of Feed Microscopists include (left to right): Albert Gehrt, Moorman Manufacturing Co., Quincy, Ill., vice president; Lewis Barefield, Arkansas State Plant Board, president, and G. M. Barnhart, Missouri State Department of Agriculture, secretary-treasurer. The group's 1960 annual session will be held in April, in San Antonio, Texas.

Feed Microscopists Elect New Officers At Annual Meeting

QUINCY, ILL.—Lewis A. Barefield, affiliated with the Arkansas State Plant Board, has been named president of the American Association of Feed Microscopists for the coming year.

Other officers elected during the group's recent annual meeting in Quincy include Albert Gehrt, Moorman Manufacturing Co., vice president, and G. M. Barnhart, Missouri State Department of Agriculture, secretary-treasurer.

Mr. Barefield succeeds Ernest F. Budde, Quaker Oats Co.

More than 80 members from all parts of the U.S. and from Canada attended the microscopists' annual meeting. The Moorman company was industry host for the meeting, which featured two evening workshop sessions in addition to the formal sessions of presentations of scientific papers on progress in microscopy techniques and related subjects.

A current major project of the organization is an extensive revision of the present feed microscopy manual, completion of which is expected in time for distribution at the 1960 meeting. The group's editorial and publications committee, headed by Mr. Barefield, is in charge of the project.

The next annual meeting of the microscopy group is scheduled for April, 1960, in San Antonio, Texas.

Named to head organization committees during the coming year were: Resolutions, Mrs. Marvell Herrera, Iowa State Department of Agriculture; controversial sample referee, Ward Creswell, Illinois State Department of Agriculture; program, E. E. Brown, Texas State Department of Agriculture; auditing, C. C. Yund, Purdue University; methods, C. Tyson Smith, University of Massachusetts; education and publicity, G. O. Kuhn, Chas. Pfizer & Co., Inc.; nominating, G. D. Miller, Kansas State University; editorial and publications, Mr. Barefield, Arkansas State Plant Board; collaborators check samples, Eugene Kerr, Hales & Hunter Co., and constitution and by-laws, Bruce Poundstone, Kentucky State Department of Agriculture.

Looks like everybody wants

DOW METHIONINE

No wonder! It helps formulators keep finished feed costs in line . . . lets them take advantage of good buys in ingredients, and supplement with highly concentrated synthetic methionine. That's why we're selling more methionine than ever . . . and we can still deliver promptly anywhere!

THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN

Advertisement

"The man says he don't want counterfeit parts in his California Pellet Mill."

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Vern Sundem

Named to Feedstuffs Editorial Staff

MINNEAPOLIS — Vermayne (Vern) Sundem has been named to the editorial staff of Feedstuffs, according to a recent announcement by Milton B. Kihlstrum, president of The Miller Publishing Co., publisher of Feedstuffs.

Mr. Sundem was graduated from the University of Minnesota in June with a B.A. degree in agricultural journalism.

He was awarded the Harvey E. Yantis memorial scholarship sponsored by the Northwest Feed Manufacturers Assn. in his senior year. Mr. Yantis was president of The Miller Publishing Co. from 1954 to 1957, and editor of Feedstuffs from its founding until his death in 1957.

Last summer Mr. Sundem was employed as an agricultural information specialist trainee for the U.S. Department of Agriculture in Washington, D.C.

T. M. Ware Named Chief Executive Officer

SKOKIE, ILL.—Thomas M. Ware, president of International Minerals & Chemical Corp., has been made chief executive officer of the corporation by the board of directors. Mr. Ware has been with IMC for 12 years, and was chief engineer, vice president of engineering and administrative vice president before being named president in May, 1958.

T. M. Ware

Louis Ware will continue as chairman of the board.

Thompson-Hayward Announce Appointees

KANSAS CITY — Two appointments have been announced by Thompson-Hayward Chemical Co., Kansas City. R. V. Cree, manager of the firm's feed chemicals division at Omaha, announced the appointment of Herman J. Albers as feed chemicals representative, and R. S. Thompson, president of the company, announced the appointment of Russell John to the company's nutritional staff.

Mr. Albers, a graduate of the University of California, was once associated with Albers Milling Co., Los Angeles, operated his own feed business in Corona, Cal., and served as feed consultant for Raza Pan American Feed Co., Colombia. In his new position Mr. Albers will serve parts of Nebraska, Iowa and South Dakota.

Mr. John is an animal husbandry graduate of the University of Missouri, and holds a Ph.D. in animal nutrition from Kansas State University. His job will be to assist in technical service and product development for the feed chemical division. He will be located at the firm's home office in Kansas City.

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Egg Type Chicks Hatched in Georgia Nearly Double

ATHENS, GA. — "No doubt about it, Georgia is getting into the egg business in a big way," says Arthur F. Gannon, extension poultryman, University of Georgia College of Agriculture.

According to the U.S. Department of Agriculture Crop Reporting Service, the number of egg type chicks hatched by Georgia hatcheries from January through May has increased 94% over the number hatched during the same period a year ago. This increase is almost double.

"Fortunately," Mr. Gannon says, "no such increase has been reported for the country as a whole or the situation would be critical. In fact, according to the Crop Reporting Service, the number of egg type chicks hatched by commercial hatcheries in the U.S. has decreased 4%, compared with the previous year.

"Chicks hatched from January through May," he explains, "will come into full production between July and November. This means an enormous increase in Georgia egg production and may create a problem in egg marketing. However, several large egg grading and marketing stations established at Douglas and Dahlonega may ease the situation."

Mr. Gannon says that with the unusually low egg prices during the past few weeks, many Georgia producers have been losing money. Because of this, he adds, they are culling heavier and marketing older hens than customary at this time of year, as the new crop of pullets is coming into production.

"Indications are, that while the price situation will improve, the margin of profit will remain low," Mr. Gannon said.

F. J. Siccardi

O. L. Thompson

TECHNICAL REPRESENTATIVES —Two veterinarians have joined Dr. Salsbury's Laboratories as technical service representatives. They are Dr. Owen L. Thompson, a native of Utah and a graduate of Washington State University's College of Veterinary Medicine, and Dr. Frank J. Siccardi, a native of Maryland and a graduate of the University of Georgia's College of Veterinary Medicine. Both veterinarians will be advisers to the poultry industry on poultry health problems. They also will serve as instructors for Dr. Salsbury's short courses.

Louisville Feed Club Elects New Officers

LOUISVILLE, KY. — Dick Case, General Mills, Inc., was elected president of the Louisville Feed Club recently at its annual outing at the River Road Country Club.

Other officers elected were Julian Evans, Ralston Purina Co., secretary; Jack Sheehan, Diamond Crystal Salt Co., treasurer, and Dick Hirschy, Master Mix Feeds, director.

CONGRATULATIONS — Al Zarrow (right), retiring president of the Louisville Feed Club, congratulates Dick Case, newly elected president for 1960.

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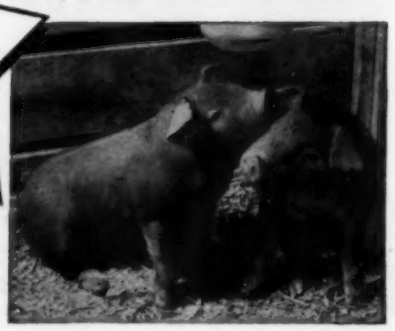
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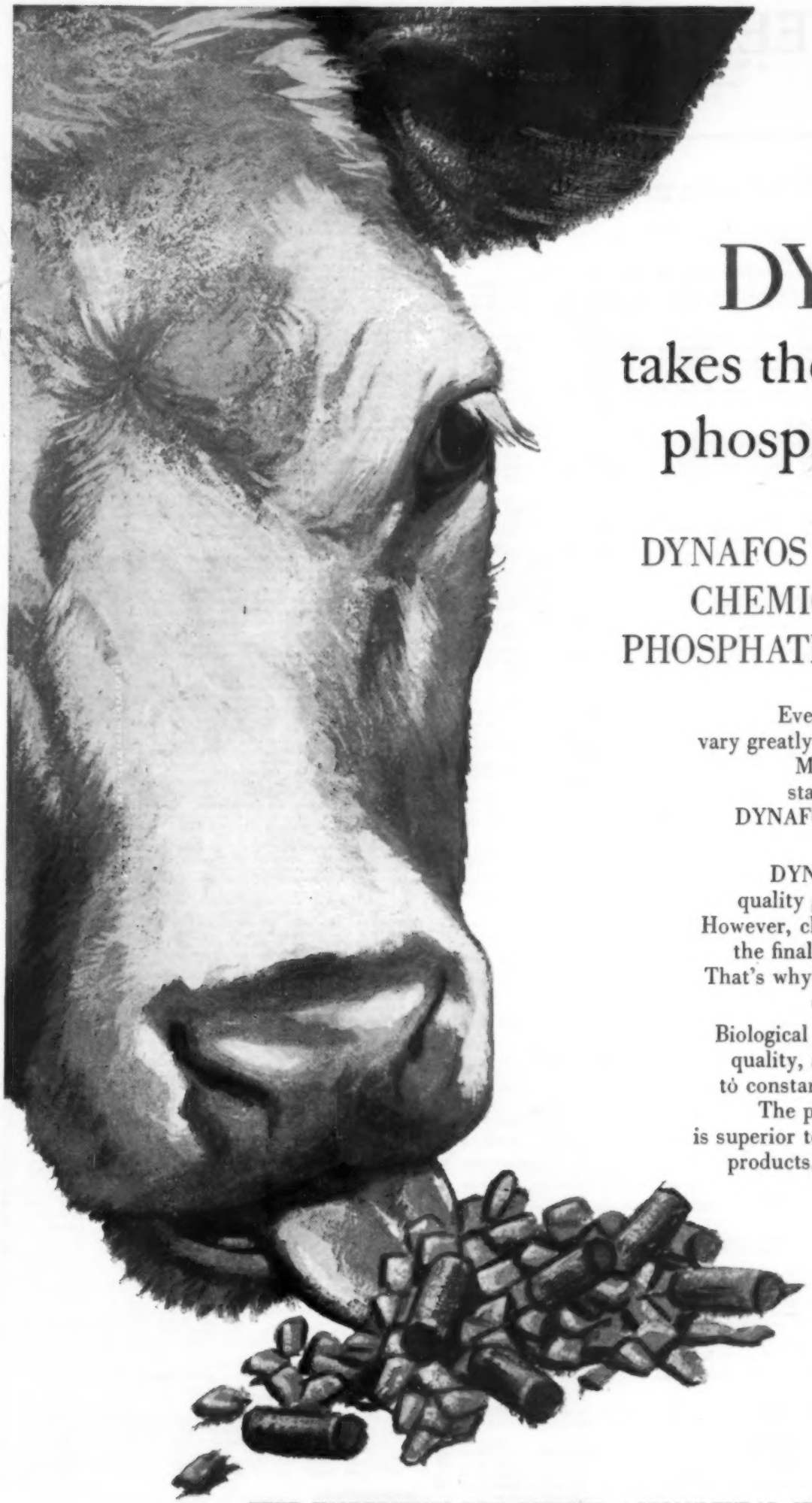

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Integrators Taking Over More Direct Operations, Including Feed Milling

By JESS BLAIR
Feedstuffs Special Writer

In many of the poultry sections of Mississippi, the integrators are taking over more and more direct control and operation of the complete enterprises. This is true not only in controlling and marketing, but also in the production of feeds, some of the integrators point out.

Many of the large integrators now have their own hatcheries and feed mills and are producing their own formula feeds.

One man who controls more than 300,000 broilers and laying hens said that he now makes all of his own feed at his own mill after previously having a franchise for a major brand of feed.

Many of the mills are of modern design and are push-button operated and can put out 100 tons of feed or more per day. Much new equipment has been added, but about two thirds of the integrators made use of their old buildings and some of the old equipment.

"My mill doesn't look as nice as one of the new ones," said the man who controlled the 300,000 chickens, "but by using the old building and some of the old equipment, I managed to modernize it at a cost of about $50,000."

In building feeds, the integrator puts in the ingredients necessary to produce eggs or meat. He is not so much concerned with cost as with the net results.

"We sell very little of our feeds through the store," said one large contract feeder, "because we would have to ask too much for it. I'm getting a dozen eggs from 4 lb. of feed, and this conversion rate is important."

The main problem in building a special feed is to find a good nutritionist, some of the integrators said. Most integrators hire such experts, but one man who holds a master's degree in agriculture plans his own feeds. He says some of the finest colleges in the nation are located in the South, and the information from their poultry departments is readily available to both poultry farmers and feed dealers.

At present most of the feed is ground and fed in mash form. Pellets are used very little, according to an integrator in eastern Mississippi, because it seems to cause the chickens to peck one another more.

"This may be only my own observation, though," he said. "Let's just say that I personally prefer to use mash instead of pellets."

Often two men can run the mill, while one can handle the large bulk trucks. In one firm, the driver of a six-ton truck was delivering 30 tons of feed daily to the contract farmers.

"Our only way of staying in business is to reduce labor and speed up operations," said the owner. "This takes new equipment, new methods and volume production. With my present set-up, I can handle 150,000 laying hens as easily as I used to feed 50,000."

Egg Program Started

BEEBE, ARK.—Orval DeVore, local feed dealer, is establishing a laying program here.

Mr. DeVore has about 30,000 White Leghorn hens which are ready to go into full production. One flock of 5,000 has already started laying and others are being raised to start production this fall.

Agricultural officials say Mr. DeVore has signed a contract with the Safeway grocery chain to handle all the eggs produced in the Beebe area. Ten persons in adjoining rural areas are participating in the program, which is the first of its type in this region.

A similar program is being developed at Searcy, Ark., by Doyle Kelson, a feed dealer.

NUTRITION TEAM

COLLEGE PARK, MD.—Dr. G. F. Combs, poultry nutrition specialist of the University of Maryland, left for Ecuador recently to serve as director of a nutrition survey team. The 15-man team and counterpart Ecuadorian personnel will conduct a nutritional survey of the Armed Forces and civilians of Ecuador. Dr. Combs plans to return in September.

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While man-made satellites and inter-space missiles sweep billions of miles into Infinity, scientists remain baffled by the miracle growth powers in DEHY (dehydrated alfalfa or grass).

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Scientists agree that Dehy contains an unknown factor essential for optimal growth and reproduction. In a recent report on a least-cost broiler formula, Hutton and others (ARS, USDA) took note of the value of alfalfa meal as a source of an unknown growth factor by specifying a minimum level of 2% *regardless of cost*. Other tests have shown the existence of an unknown factor in Dehy which is essential for *maximum hatchability*. (Touchburn, Poultry Sci. 36:591, '57)

The challenge of the unknown remains, but this we know . . .

Scientists agree that Dehy is an economical source of vitamins A, E, and K, riboflavin, and particularly xanthophyll. Ferguson and others at Texas A & M calculated that 5% of Dehy added $10.08 worth of xanthophyll to 100 lb. of one diet at a cost of 94c.

For a better, low cost POWER PRODUCER—in all your poultry feeds—use DEHY.

Dr. H. R. Bird, University of Wisconsin, in answering the question, "Why Feed Alfalfa Meal to Chickens?", had this to say, "If alfalfa meal supplied only one useful nutrient, it would be easier to answer the question. Because it supplies several, there are several good reasons for using it and they all add up to more economical conversion of feed dollars to product dollars."

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R. Guy Wilson (right), Chairman of the Board of J. C. Curry & Company, discusses olden times with President Robert M. Millsap and Vice-President C. H. Cowan. "Omolene, the principal of yesteryear, still is a good seller," says Mr. Wilson, "and it has been joined with a full line of Chows and Sanitation Products."

"For 50 years we've seen Purina ahead of the times"

—says Robert M. Millsap, President
J. C. Curry & Company, Bessemer, Alabama

"During the half century that our company has been the Purina Dealer in Bessemer," says Mr. Millsap, "we've seen our 'country town' engulfed by metropolitan Birmingham. Many of our customers have disappeared with the city's growth; yet we have enjoyed a large volume of Purina business through the years because Purina has been ahead of the times.

"Fifty years ago, our principal Purina business was Omolene for mules used in mining and draying. Later we got the bulk of our volume from 'backlotters' and farmers with small flocks and a few head of stock. With more than 700,000 people now living in Jefferson County, this business has disappeared.

"Our volume was held up because Purina was ready with plans and Chows which enabled us to create new business by selling commercial flocks, dairies and hog raisers. This has enabled us to build new customers and keep up our volume.

"Feed business is good, even in big cities like ours, if you do creative selling.

"There is not a feed franchise that matches Purina," says Mr. Millsap, "because of Purina Research, Purina Quality, Purina Sales Helps, Purina National Advertising and consumer acceptance of Purina Products."

Mrs. J. D. Gentry brings in the eggs from the commercial poultry flock. The Gentry chickens have been fed Purina, bought from J. C. Curry and Company, for more than 30 years.

PURINA . . . YOUR PARTNER IN SERVING ANIMAL AGRICULTURE

UP OR DOWN

By Dr. Leonard W. Schruben, Agricultural Economist, Kansas State College

Hay Price Changes

There always seems to be enough hay raised so that prices drop in summer. The price for the season usually reaches the low point during July. Higher prices prevail in the winter months. This pattern doesn't always develop in exactly the same manner, but it has been consistent enough to where you could almost count on it. Of course, price in the summer sometimes represents hay which has a higher moisture content than in winter. You should make an allowance for this factor when comparing prices.

To show how strong the seasonal price change has been over the past years we have prepared Exhibit 1. By reading this you can compare prices for the next 12 months. Here is how to read Exhibit 1. For example, the current month is July. The price of alfalfa hay went up from July to August 80% of the time. You can tell this by reading down from the column headed August and you will find it 80. Under September you will find a 93 and during the fall and winter months you'll find a row of 100's. This means that from October through April the price of hay was higher every year during those months than during July.

EXHIBIT 1. Alfalfa Hay (Baled), Average Prices Received by Kansas Farmers, Showing Per Cent of Times Price Went Up From July to Following Twelve Months, 1939-1953

Base month	Subsequent Months											
	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July
July	80	93	100	100	100	100	100	100	100	7	57	56

EXHIBIT 2. Hay Production, U.S., 1930 to Date (in 1,000 tons)

Year	Alfalfa hay	All hay
1930	22,713	74,527
1931	21,396	75,203
1932	25,924	83,721
1933	24,113	75,072
1934	19,036	60,485
1935	28,564	90,364
1936	24,737	70,014
1937	26,685	83,002
1938	28,503	97,420
1939	26,935	86,533
1940	30,286	96,050
1941	32,917	95,754
1942	37,162	107,717
1943	33,442	103,128
1944	33,323	102,889
1945	33,858	107,438
1946	31,092	99,518
1947	32,489	100,576
1948	32,700	96,172
1949	38,645	96,900
1950	39,219	103,820
1951	42,607	109,502
1952	428,230	106,386
1953	44,755	108,245
1954	49,960	107,834
1955	59,251	112,737
1956	61,414	108,680
1957	69,044	120,977
1958	67,134	121,924

The production of hay in the U.S. since 1930 is shown in Exhibit 2. Ten year average production has been 110 million tons. How much we will have this year depends on the weather and other things that can't be foreseen. No one can tell yet whether or not the summer will turn off dry and hot or whether we will have a good hay season.

It would appear at this time, however, that the seasonal low point in hay prices this year will be in July and that a somewhat less than the usual seasonal rise will occur later this winter. This is due in part to the supply of hay already on hand from previous crops. It does appear likely that prices will be some higher this winter if the prospects of an average crop are realized.

If you are financially able to carry low price but high quality hay from periods of plenty to times when drought reduces yield you are performing a service not only to yourself but also to your community. The time to build a feed reserve is during a time when supplies are up or price is down in your area. If you do this you will not be caught short the next time dry weather hits your area.

Because of the bulky nature of hay it is costly to transport from one area to another. For this reason, you should compare prices in different areas along with costs of transportation. For some dealers handling hay can be profitable.

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MAYVILLE, N.D.—Haugen Feed & Dehydrating Co. has been incorporated, listing $50,000 capitalization, to process and manufacture feeds, by Oliver, Alf, Agnes and Helen Haugen, all of Mayville.

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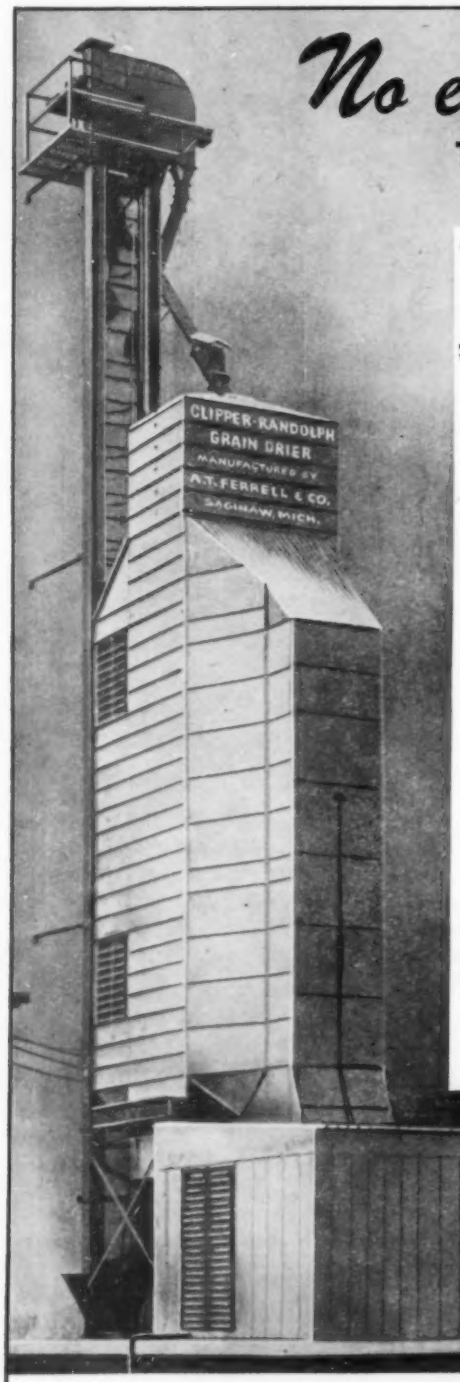

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OWEN K. NUGENT, Gen. Mgr.
SUSIE TRACY, Asst. Gen. Mgr.

May 22, 1959

Mr. E. A. Anderson
635 W. 8th Street
Fremont, Nebraska

Dear Andy:

Early in 1958 the management of The Ford Cooperative Exchange, decided to purchase a grain dryer. Much time and consideration was spent studying grain dryer operations and many miles were covered in observing different makes of grain dryers. In all we visited with the owners of six different brands of grain dryers and studied the installation and operation of each carefully.

The Clipper Randolph was selected as having all the features we desired in a grain dryer and after one years operation we are certainly proud of our selection. The cost of operation is less than 2/10 cents per bushel. While the quality of the grain is not lowered in the least part, the grain grade is raised on every bushel.

Our Randolph has performed up to and in most cases exceeded its specifications in every phase of operation. We have found the Randolph to do everything your representative told us it would. Another feature of the Randolph we like very much is that no extra labor is required while operating it. Our regular elevator operator runs the dryer and the elevator at the same time without neglecting either operation.

With the outstanding success we have had with our present dryer, you may be assured our next grain dryer will be a Clipper Randolph.

Sincerely,
Owen K. Nugent
Owen K. Nugent
Manager

OKN/st

* Reports Owen K. Nugent, General Manager of the Ford Cooperative Exchange, on the outstanding success his group has enjoyed with its new Clipper-Randolph Grain Drier.

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WINS PAY WAY CONTEST—Turley Miller (left), Hutchinson, Kansas, district manager for Pay Way Feed Mills, Inc., Kansas City, is shown "getting the gavel" from Harvey Benson, Pay Way sales manager. The gavel symbolized Mr. Miller's winning of the company's annual new dealer drive, which featured a railroad theme this year. To win the honor of "Chairman of the Board of the Pay Way Express," Mr. Miller moved more feed tonnage through new dealers than any other district manager. The gavel was presented to him at the company's recent fishing trip in Granby, Colo.

SURVEY

(Continued from page 10)

given and agreed period of time will remedy the situation.

The processors said they cannot shut down for any length of time, since their overhead would virtually make it impossible for them to reopen.

The contractors feel such action would demoralize the entire industry with the hatcheries hurt almost beyond recovery.

Others observed the total absence of broilers in supermarkets might not prove so helpful to the industry. They expressed the doubt the housewife would demand chicken at higher prices.

"Cheapest Dish"

One contractor pinpointed that discussion by comparing the wide price differentials between poultry and red meats at the consumer level. He said too many housewives have come to look upon chicken as the "cheapest dish she can serve."

But he declared that broilers, featured at the 27¢ bargain level, move much faster than when the price is higher—in some stores as much as 40¢ lb. when not featured.

"The $64 question," he remarked, "is how to get the chain stores to continue to feature chicken as an economy dish but at 33@35¢ lb. That certainly shouldn't work any hardship on the consumer and it would give all of us a chance to share a little bit in the profits. In the long run, I believe the consumer would be better off with poultry prices stabilized a bit more in the stores."

One suggestion that was repeated time and again is the elimination of the weekly reports on egg settings and chick placements, as well as the price of baby chicks. Within the past few months, an increasing number of poultrymen who share this opinion, has been noted.

"The chain store buyer is the one who really benefits by those reports," one contractor observed. "He can sit in his air-conditioned office and know with remarkable accuracy how many broilers will go to the market two months from now. So he can plan his big 27¢ specials well in advance, knowing he can buy the broilers he needs at his own price when he is ready for delivery.

"When the time comes to process the birds, the price is pretty well set. We can take it or leave it. The chain can always cut out broilers at the last minute if the price isn't right. Then we have chickens running out of our ears. Both ways we lose."

Another poultryman who was in the group added that while this same buyer can study all the hog and cattle reports he wants he has no way of knowing when steers or hogs on feed are going to the market or in what quantities.

"There's not much he can do about buying pork and beef at his own price; and he knows that unless he can supply the demand for red meat in his stores, the customer goes where she can get what she wants," he said.

"That's why we pay more for low-grade hamburger than the housewife does for choice broilers and grade A turkeys. I'm heartily in favor of not giving the buyers all the inside information on our business so they can name their own price."

Press Blamed

One dealer pointed a finger of blame at the press. He said too much emphasis is often placed on the efficiency of the industry to the detriment of the price structure.

"You enterprising reporters like to write features about how cheaply we produce broilers. We appreciate those compliments, to be sure, but it gives that buyer more information on how he should set prices. He thinks because you tell about one fellow who raises one batch of broilers for less than 15¢ lb., the rest of us are trying to gouge him when we say we need better than 16¢ lb. just to break even.

Mr. Stringer said he had noted an increase in the number of broilermen who are questioning the value of the placement reports, but he said his office has taken no action since there has been no collective efforts on the part of the industry to discontinue the reports. He added such a decision would more than likely have to be made in Washington.

Many of the contractors said they doubt the accuracy of the reports, not by any means to be construed as a reflection on the part of those who compile them, but more likely from those furnishing the information. It was recalled that several years ago, the USDA discovered wide discrepancies in hatchery reports in the midwest, with some reporters listing settings and hatching for hatcheries that had been out of business a year or even more.

Effect on Other Phases

How is the broiler depression affecting other phases of the poultry business?

Several equipment dealers admitted their sales volume is off in comparison with previous years, and added that collections are somewhat below normal. But none indicated a feeling the broiler business, in general, was about to blow up.

One supplier said he noted a slow down in the purchase of new equipment by commercial egg producers, which he took as an indication the industry was viewing expansion "with extreme caution."

Retail merchants in this area expressed grave concern about the current price situation, but said so far retail sales have not reflected a spread of the "depression."

It was pointed out that while many growers have been dropped, the normal income at that level has remained fairly steady and many growers had other employment. Most of these live outside the Gainesville trade area, so it was not considered a barometer as to the general effect on the community.

Where is it likely to end — and when?

Most of those interviewed—feed contractors, hatcherymen, processors, suppliers—believe broiler production will show decided decreases as some contractors go out of business on their own volition or without having any control over that decision.

The inefficient growers have long past been pruned. Some look to consolidation among the contractors—with the possibility the larger operators will get bigger and the "little fellow" will be swallowed up or forced out of business.

Generally speaking, the contractors hope they can survive without forced consolidations.

Few share the belief the large feed companies will close the books and move in to take over broiler growing. Most discount the talk that some feed companies want to sell broilers in conjunction with their cereals, cake mixes and similar products.

Maintenance of existing growing facilities, relatively few of which are owned outright by the contractors,

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was pointed out as a major obstacle to operation by the feed companies.

Other problems the feed companies might face which do not exist now are salaries for growers, instead of contracts based on poundage and efficiency, meaning costly employee benefits and the greater possibility of organized labor activities at that level.

One spokesman said the chains might not relish the idea that supplies of broilers would be controlled by fewer producers. The threat of union activity on other levels of the broiler industry was cited as the most likely reason why the feed companies and bankers would take over and then only as a last resort.

Program Planned on Soybean Marketing

HUDSON, IOWA — Marketing problems of the U.S. soybean crop will get major attention at the 39th annual convention of the American Soybean Assn. in St. Louis Aug. 11-12, according to George M. Strayer, association executive vice president.

"Soybeans are at the crossroad," says Mr. Strayer. "After a generation of rapid expansion there will be a sizable carryover of the crop for the first time this fall. The fact that up to now soybeans never have had the surplus difficulties of other crops has been due in large part in recent years to the vigorous marketing programs of the American Soybean Assn. and the Soybean Council of America."

Four speakers will discuss various aspects of the problems: "Market Development for U.S. Oilseeds and Oilseed Products," by Russell Hudson, U.S. Department of Agriculture; "Another Look at Selling Soybeans," by Prof. Luther J. Pickrel, extension economist at the University of Minnesota; "How Much Protein We Can Use in America," by Dr. Elmer R. Kiehl, chairman of the department of agricultural economics, and "Research Projects in Foreign Countries Using PL 480 Funds," by G. E. Hilbert, USDA.

The convention will be held at the Hotel Sheraton-Jefferson, and will immediately follow the annual meeting of the National Soybean Processors Assn. at the same hotel on Aug. 10. Firms serving the soybean industry will have exhibits at both meetings.

Discuss Prevention of Poultry Condemnations

DECATUR, GA. — Poultry condemnations may be prevented by more supervision in processing plants, and improved catching and handling on the grower level.

This was the concensus of three U.S. Department of Agriculture poultry officials who led a group discussion on "How to Salvage Poultry Turn-Downs" at the Southeastern Poultry & Egg Assn.'s second annual Broiler Sales Clinic recently.

Dr. J. K. Keim, southeastern area supervisor, poultry inspection division; Ward Wagner, marketing specialist, grading branch, and Dr. Roy Wenger, assistant chief, poultry inspection, agreed that the southeastern states are lower in condemnations than other areas of the nation. However, they pointed out that condemnations have fluctuated in the southeast from a low of 1.26 to a high of 4.87 for one week since the first of the year.

They also brought out that improper labeling can adversely affect the coloring of birds, and that box liners, improperly put on, will allow excessive melting of ice and a further reduction of quality.

More hard-nosed selling and less "order taking" is needed on the part of southeastern broiler salesmen, another speaker, Frank L. Outlaw, president of Food-Lane Stores, pointed out. He said that broiler salesmen would profit by more personal contact work with their customers.

Twenty-three salesmen and sales managers attended the two-day clinic, which annually presents a compact program aimed at increasing the broiler salesman's effectiveness in every phase of his work from knowledge of his product to customer relations.

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Linear Programming Simplified at Penn

UNIVERSITY PARK, PA.—It was recently reported from the College of Agriculture, Pennsylvania State University, that Dr. R. F. Hutton, professor of farm management, and co-workers have worked out calculation devices and methods which it is believed will extend the usefulness of linear programming in least-cost feed formulation to small millers and farmers.

Dr. Hutton notes that electronic computers, such as Pennstac at Penn State, make comparatively easy work of formulating least-cost mixes from ingredients which are frequently changing in price. But, he says, only the largest millers have these computers.

Linear programming and electronic computation are being utilized to work out problems in feed formulation by economists at Penn State. Together they are also beginning to answer questions in farm planning and livestock feeding which would be too big a task for pencil and paper methods of calculation. Dr. Hutton said selection of the best feed formerly was impossible because of the great volume of ciphering that had to be done when costs or other conditions changed.

In feed formulations, he explained, entries in linear programming are ingredients and the requirements of the feed. In farm management, entries are the resources the farmer has to work with and alternative enterprises that use these resources.

By systematic selection, a combination of enterprises is selected for maximum net income from land, labor, machinery, buildings and livestock. In this way, Dr. Hutton said, returns from expansion or contraction of the dairy enterprise may be compared with poultry, beef cattle or sheep.

Oregon State Tests 'Sliding-Scale' Grain Adjustment in Cattle Feeding

By ROBERT BIRDSALL
Oregon State College

CORVALLIS, ORE. — A "sliding-scale" adjustment of grain level to body weight is pointing the way to faster, cheaper beef cattle gains in Oregon State College experiments.

Trials started last November with more than 200 weaner steers at Milton-Freewater (Ore.) feedlots are testing a complete program of wintering and fattening steers: hay, silage and grain feeding; use of antibiotics, tranquilizers and hormones, and effects of pest-control on animal gains.

Results to date indicate a marked advantage of sliding-scale grain feeding, or stepped-up percentages in relation to body weight, according to Dr. David C. England, assistant professor of animal husbandry, who is in charge of the trials.

Steers fed for 196 days at a constant grain level of 1½% of body weight gained an average of 2.01 lb. daily at a cost of $0.187 per lb. including labor and other feedlot costs.

Costs per pound of gain were down to $0.175 for steers on sliding-scale grain levels of one half per cent of body weight for the first 64 days. 1% for 56 days, 1½% for 56 days and 2% for finishing.

Results were reported in late June at the project's annual field day, although animals will continue on fattening rations until late summer, Dr. England said.

While steers on the above sliding-scale program had average daily gains of only 1.79 lb. for the 196 days at the end of June, their gains averaged 3.33 lb. after going on the 2% level in early June.

Fastest average daily gains for the 196 days—2.23 lb.—were made by steers fed at 1½% grain level for the first 177 days, then boosted to 2%. Costs per pound of gain averaged $0.177.

Other Results

Another lot of steers on sliding-scale feeding averaged daily gains of 1.71 lb. for the 196 days when fed at one half per cent for 64 days, 1% for 84 days and 1½% for the remaining 48 days. Cost per pound of gain was $0.176.

Dr. England said the trials to date indicate an advantage in early-wintering of weaner steers with grain level at one half per cent body weight, or about 2.5 lb. daily grain intake; then moving to 1%, 1½% and finally to 2% of body weight.

Grain concentrate in three eighths inch pellets consisted of barley, beet pulp, millrun, molasses and salt. Cost per ton averaged $52.78.

Another key finding of the experiments was the advantage of hay over silage for wintering weaners and during the early stages of fattening. Silage proved superior during the later stages. Results ran contrary to the common practice of feeding out the silage during winter feed programs.

Both peavine hay—a by-product of the pea canning and freezing industry—and alfalfa hay gave faster and cheaper gains than did peavine silage during a December-January wintering period when animals were receiving an average of 2.5 lb. of grain daily or one half per cent of body weight. Alfalfa gave slightly faster gains than peavine hay during the period, but costs per pound of gain were about equal for both types of hay.

Peavine hay advantage over silage continued for the first 84 days of a 132-day fattening period starting in February when average daily grain-intake was boosted to 1% body weight. At this stage, peavine hay proved superior to alfalfa hay.

Peavine Hay Data

Figures for the first 84 days of fattening were: Peavine hay, 1.98 lb. gain per day, costing $0.13 lb. gain; alfalfa hay, 1.79 lb. gain per day, with cost per pound of gain rising to $0.179; alfalfa hay-peavine silage combination, 1.79 lb. daily gain, $0.15 lb. gain and peavine silage, 1.57 lb. daily gain, $0.150 lb. gain.

During the last 48 days of the 132-day fattening period, however, peavine silage produced faster and more economical gains than either alfalfa or peavine hay. Grain level intake was up to 1½% of body weight.

Figures for the 48 days were: peavine hay, 2.65 lb. daily gain, $0.149 lb. gain; alfalfa hay, 2.53 lb. daily gain, $0.168 lb. gain and peavine silage, 2.72 lb. daily gain, $0.126 lb. gain.

Peavine hay was tested this year for the first time in Oregon State College experiments to find its possible place in a feeding program. Vines were spread back on the land after vining, then dried, windrowed and baled. Peavine hay was rated at $17 ton; alfalfa hay, $22 ton and peavine silage, $5 ton. Labor and other feedlot costs were figured at 7¢ per head per day.

Tranquilizers, Antibiotics

Tranquilizers and antibiotics included in rations failed to improve average daily gains during the steers' first 35 days in the feedlot. Dr. England and Norton Taylor, Umatilla County agent assisting in the trials, plan further tests with higher levels and with injections in addition to use as feed additives.

Six rations containing tranquilizers and antibiotics were tested to determine their value in helping remove stress on weaner steers adjusting to feedlot conditions.

Materials tested included Terramycin, an antibiotic; hydroxyzine, an oral tranquilizer; and Dynafac, a chemobiotic, all used singly and in combination in the rations. None gave significant daily gain increases, Dr. England and Mr. Taylor reported. Additives per head per day were 50 mg. Terramycin, 2.5 mg. hydroxyzine, and 1.5 gm. Dynafac.

Hormone implants with stilbestrol and Synovex improved both wintering and fattening gains. Total feeding period gains were comparable for three implants of stilbestrol in comparison with two implants of Synovex.

Stilbestrol implants of 18 mg. were made on the 1st, 64th and 148th days, giving an average daily gain of 2.08 lb. for the 196 days compared to a control lot of 1.8 lb. daily gain. Synovex implants on the 1st and 84th days gave average daily gains of 2.07 lb. A single Synovex implant on the first day gave average daily gains of 2.04 lb.

During the wintering period, hormone implants increased average daily gains fully as much on rations producing low average daily gains of one pound as on rations producing higher average daily gains of slightly more than 1½ lb.

Treatment of animals with Co-Ral controlled cattle grubs but gave no increase in daily gains. Dr. R. L. Goulding, Oregon State College livestock entomologist, pointed out, however, that long-range benefits to the livestock industry through increased sale price of treated animals may be more important than any effects on rate of gain.

The Milton-Freewater feedlot experiments now in their fifth consecutive year are conducted cooperatively by the Oregon State College Agricultural Experiment Station and Extension Service, beef cattle producers and feeders and business firms. Test animals are owned by ranchers who provide feed and facilities.

Firm Adds to Capacity

DAKOTA CITY, NEB.—An additional 1,500 tons of inert gas storage capacity is being constructed at Beermann Bros. Dehy., Dakota City. Mid-States Construction Co., Omaha, is doing the work.

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Kansan Tells State's Competitive Position In Production of Eggs

MANHATTAN, KANSAS — "Quality is a must if we are to be competitive," said Prof. Tom Avery, head, Kansas State University poultry department, in a recent bulletin of the Kansas Poultry Assn. "The over-all quality of Kansas eggs has greatly improved during the past three years," he commented, "but must be foremost in the minds of not just producers but all persons charged with the handling or sale of eggs."

Prof. Avery observed that most Kansas poultrymen are wondering how present adjustments in the poultry industry are likely to affect them. "Some say we can't compete with the big boys on the two coasts or with the rapidly expanding South," he said. "Let's take a long look at our position and see just how we are likely to stack up. When there is keen competition in any business it invariably boils down to the survival of the most efficient, which in this case means who can produce the best dozen eggs the cheapest and can market them to the greatest advantage."

Prof. Avery remarked, "A hen in Kansas lays just as good an egg as a hen from any other state. It is what care the egg has after it is laid that really counts. Surely we can take as good care of our eggs as anyone else."

He expressed the opinion that he doubted that major producers in the important poultry producing areas can produce eggs or turkey meat any more efficiently than can Kansas producers. "Our big advantage is labor," he said. "Most of our eggs and turkeys are produced on farms where there is diversification and a great deal of 'free labor.' Farmers depend on total farm profits for a living, not just poultry profits. This makes it easier for them to weather the inevitable periods of low egg prices. Labor of wife and children that might not be used otherwise can be a real contribution to the poultry enterprise on a Kansas farm."

Prof. Avery noted that most poultry in Kansas is raised on land that is already available, and often existing farm buildings can be converted at little expense to a satisfactory poultry unit.

As poultry units become larger there is more likelihood of a saving in feed through increased use of home grown grains and a good concentrate, he said. Prof. Avery noted that greater mechanization on Kansas farms gives the average farmer more time for his poultry enterprise.

"It is hard to believe that with these natural advantages anyone is going to force Kansas poultrymen clear out of the picture," he said. "Let's concede for the moment that there may not be a place for a lot of mammoth commercial poultry farms in this state, but pure economics would make it appear that there is a very definite place for a sizable number of farmers who keep from 500 to 5,000 hens as a part of their farming enterprise. The biggest stumbling block at the moment appears to be getting eggs to market with quality and in quantity."

He said no one is likely to put the small man completely out of business and there is no particular reason why they should. Prof. Avery believes that if the small producer is to survive he will need to concern himself with quality and probably will need to cater to a local specialized market.

He asked, "Can't a Kansas farmer beat the fellow who hires someone else to do his work for him?" And answered, "He sure can if he will just keep his eye on the cost figures, on quality and on what the consumer wants."

OREGON MAY STOP IMPORTING CORN

CORVALLIS, ORE. — The largest corn crop ever produced in Oregon is due for harvest this fall. A crop of more than 4½ million bushels is forecast — a third larger than last year and nearly three times greater than the average harvest of the past 10 years. This means, says Elvera Horrell, extension agricultural economist, Oregon State College, that for the first time since pioneer days Oregon corn production may equal, or even exceed, use of corn in the state.

Iowa State Awarded $28,400 for Research

AMES, IOWA — Iowa State University has been awarded a National Science Foundation grant of $28,400 to support research involving blood group studies of chickens, according to Dr. Arne Nordskog, who will conduct the research program.

The project will attempt to verify whether blood group gene markers can be used to identify chickens which are genetically superior in rate of egg production and other important economic factors such as high hatchability and early maturity.

The research may have wide implications in other fields such as medicine and evolution where blood group differences are also important, according to Dr. Nordskog.

Iowa Cow Conference Planned for Sept. 10

AMES, IOWA—The ninth annual Iowa State University cow conference for Iowa dairymen will be held at the experimental farm at Ankeny Sept. 10, according to A. R. Porter, in charge of dairy husbandry.

Breeding will be the conference's main theme this year. The university's herd of more than 86 identical twin Holstein heifers will be shown and discussed. The herd is being used to study some relationships between environment and inherited production ability, according to Mr. Porter.

BUSINESS ADDITION

BREMEN, KANSAS—The Bremen Farmers Cooperative Assn. is planning to add new grinding and mixing facilities to its feed business.

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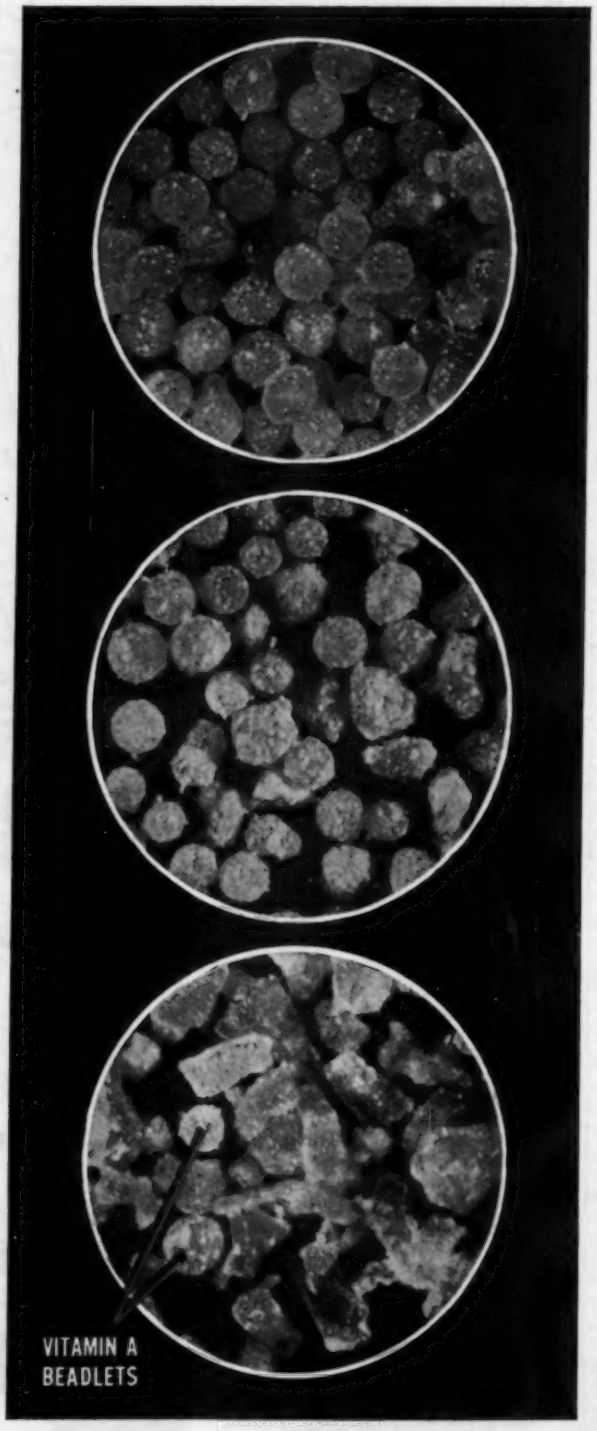

THREE PHOTOMICROGRAPHS OF VITAMIN A PRODUCTS

Top: Micratized Vitamin A, Nopcay® Type III. Spherical beadlets are A-active particles. Note that *all* particles in this product are A-active.

Center: Micratized Vitamin A, Nopcay Type V. Note that almost all particles are A-active. Occasional non-spherical particles are diluent, and included to assure free-flowing properties of product.

Bottom: A typical competitive product. Only two spherical A-active beadlets surrounded by non-active filler.

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APHF

(Continued from page 1)

Summaries of some of the talks and convention proceedings follow. (Other reports will be presented in next week's Feedstuffs.)

BROILER SCHEDULES — The broiler industry must tie placement-marketing schedules with consumer demand to maintain profitable operations, Dr. L. A. Wilhelm, the Quaker Oats Co., Chicago, said. Dr. Wilhelm addressed the meeting on "Improving Your Odds for Success in Broilers."

His plan basically is as follows: If the "dealer" places his houses to market 100% of capacity from April through September he should plan to market 75% as many in October; 60% as many in November, December and January; 65% as many in February and 75% as many in March. Maximum marketing during the peak period would be an average of 34 million per week. Dr. Wilhelm said variations of 30-40 million during the peak period might be expected for "uniform returns."

This should produce a maximum price for the year of 19¢ lb. and a minimum of 17¢ lb.

The Quaker Oats poultry development and market research head said "the broiler business to date has been largely built on the idea of decreasing unit costs and increasing the number of units until at times it seems that some integrators have almost forgotten that a successful operator must have 'profits.' "

Before drawing any conclusions, Dr. Wilhelm gathered Alabama broiler prices for a six-year period. He noted during the first and second quarters of those years the price exceeded the average 16 out of 18 times. During the third quarter it bested the annual average 14 out of 18 times. In the fourth quarter it was above the annual average only 1 out of 18 times.

Dr. Wilhelm noted in February, March, April, May, July and August, broiler prices were above the annual average all of the time. During January and June, they exceeded the annual average two-thirds of the time. This compares with September and October where prices were below the average two-thirds and four-fifths of the time, respectively. During November and December the prices during the six-year period never went as high as the annual average.

Dr. Wilhelm developed the broiler price "odds" chart to show the most desirable times, price-wise, to market broilers. The chart showed the odds for receiving the annual average price were "excellent" during the latter part of February through the forepart of June and the latter part of July through forepart of September. The odds were "good" during the latter half of January through the first half of February and during the last half of June and first half of July. Odds were "poor" during last half of September through the first half of October. Odds were "foolish" during the last half of October through the first half of January. (The annual average prices used for the study are as follows: 27.0¢ in 1953; 22.8¢ in 1954; 24.5¢ in 1955; 19.2¢ in 1956; 18.1¢ in 1957 and an estimated 18.0¢ for 1958).

Egg Settings

What about the hatchery egg setting schedule? The hatchery would run 100% of capacity during December through June, 75% of capacity in July and November and 50% of capacity August through October. This calls for a capacity of hatching eggs during November through May when the breeder hens do the most efficient job. There would be a need for 75% as many eggs in June and October and 50% as many during July, August and September.

What about the hatching egg flock? Dr. Wilhelm assumed the following before drawing conclusion on the hatching egg supply:

1. The average flock comes into production by 6 months of age.

2. It produces 75% 22 oz. eggs by 7 months.

3. The flock lays for an additional 6 months.

4. It lays 400 hatching eggs per 100 hens per week during November through May.

5. The average flock lays 300 hatching eggs per 100 hens per week.

If the dealer attempts to match production potential with period of demand, spring-hatched breeders would be placed in May (April, too) and fall chicks in November (October, too).

Dr. Wilhelm said, however, this is only a part of the story.

To hatch 100,000 chicks per week at the 100% time requires 120,000 eggs per week. This would require 30,000 breeder hens during the period or 35,000 plus males after blood testing or starting approximately 40,000 day-old pullets.

This same schedule would call for 60,000 eggs for July, August and September and 80,000 for October. This requires an average of 18,000 hens or the placement of 25,000 pullet chicks for the November period.

Dr. Wilhelm admitted this is a radical departure from what is advocated by some breeders. He realizes some flocks will do better, but will 30 flocks average better?

What about broiler house usage?

Dr. Wilhelm said to handle 100,000 placements per week at the peak and shrink to 50-60,000 for fall sale, requires 50 houses averaging 20,000 broilers each. This is based on an 8 week growing period with a 10 week safety and cleaning interval for each brood.

If 50 new growers were started with 50 houses usage would be as follows:

32 weeks—25 houses
33 weeks— 3 houses
34 weeks— 5 houses
35 weeks— 5 houses
36 weeks— 4 houses
37 weeks— 4 houses
38 weeks— 4 houses

Most growers would utilize facilities about 70% of the time.

Dr. Wilhelm said if more broiler dealers would use a comparable long range planning chart, each grower's work and vacation period could be scheduled in advance.

FUTURE MARKETING PATTERNS IN EGGS—Producers must aim for specific egg markets in the future agreed panelists at the congress and exposition. In addition, they concurred there will be a maximum of "one stop" between producer and retailer in years to come.

The panel discussed "Future Marketing Patterns in Eggs." Panel members were Ben Geifman, executive vice president, Eagle-United Stores, Rock Island, Ill.; Ray Flummerfelt, in charge of egg marketing, Grange League Federation, Ithaca, N.Y., and Howard Randolph, president, Randolph Foods, Inc., Guthrie Center, Iowa.

The following is the summary of their comments:

Geifman: His stores plan to use one middle man distributor or assembler because they can be more selective in purchasing. This enables the store to buy on specification.

Stores are becoming more interested in the production of eggs, Mr. Geifman said. In his stores, they specify the following: (1) white eggs only, (2) the type of feed used, (3) eggs must be gathered four times daily, (4) eggs properly oiled, (5) amount of feeder space per hen, (6) age of birds (not over 15 months), (7) refrigeration on farm.

Mr. Geifman sees poultry farming as big business. He said retailers and consumers must come to a common understanding on some of their problems, particularly in the fields of merchandising and pricing.

Flummerfelt: He sees the marketing of eggs from sources near the consuming centers. Citing his own New York area, Mr. Flummerfelt said this is true if producers in the area will produce uniform, high quality eggs. Many producers in the Northeast are beginning to place refrigeration on the farms.

Mr. Flummerfelt said the industry must think in terms of specific markets. Retail stores, dairies and eating establishments are outlets for eggs.

Refrigeration and shell treatment will be standard marketing procedures on farms.

He sees fewer, but larger, egg handling units. Automation in handling will be the trend.

Flocks will be in following categories:

(1) A few larger operations having good management and including marketing functions.

(2) Producers in the 5,000 to 10,000 class who utilize family labor and do the job efficiently. This group may take advantage of home-grown grains.

(3) Producers with 1,500 to 3,000 birds who are located near consuming centers and serve a premium market.

(4) Small flocks that are considered side-line operations. Primarily, the housewife will look after this group and use "free" grain.

Randolph: The midwestern producer is not becoming involved in contract operations as readily as his counterpart in other areas. Feed companies and other contractors have made few inroads because of variability in demand for midwestern eggs.

Mr. Randolph believes egg markets will become more stable and experience a narrower fluctuation between values of eggs in different areas compared with present.

The breaking industry will likely establish flocks to supply its plants, probably near the plant. He said more uniform year around production will see a discontinuance of breakers buying only in the spring "flush" season. Ten to twelve months of operations will enable breakers to spread costs of operation over a longer period of time.

"WHO'LL BUY TOMORROW'S CHICKS AND POULTS?" It is speculative . . . and depends on which section of the country you operate. These were opinions panelists expressed during the congress and exposition.

The following are some of their comments:

"Chickens won't be bought—somebody will sell them!"

One panelist said he would restrict his comments to the egg industry. Tomorrow's chick customer will be a poultryman—whether he has other activities such as a feed man, hatcheryman, broker-processor or groceryman.

The size (and type) of the operation will depend on what the investor expects to make in return. The feed man processor or independent operator will expect at least 5-6% return on his money.

However, there is considerable room for the diversified, independent farm operator. His importance in the field is that he has several important commodities to sell. One is time—the other is a man with his money invested, who usually does a superior job to the man whose only investment is his managerial time.

The panelist said he sees an excellent future for the farm flock with 800 to 2,000 birds tied in with a diversified farm operation. These operators will be able to compete because their livelihood does not depend on one project.

Another panelist said the destiny of poultry industry is now in the hands of fewer and larger operators. A handful of large operators can alter their policies and change the course of an industry in an area.

The broiler and layer customer of the future will buy in larger quantities. A definite pattern has already been established in broiler chicks. Most of the chicks sales will be to large companies financing the production of millions of broilers.

Production of commercial egg-type chicks sales will follow the same pattern as broilers, but to a lesser degree. Many sales of egg-type chicks will be through contractors who are financing the production of commercial eggs on a large scale.

Certain factors will determine the proximity of sales: (1) Availability of markets, (2) feed costs, (3) need for an income.

Producing areas will be many miles from the consumption source, but some commercial producers will linger close to the large cities. The latter are efficient and will establish specialized markets.

Turkey production methods will follow patterns set by broilers, but not necessarily in the same areas. Small producers—like the egg producer—can survive in areas near large consuming centers, but will need specialized markets.

One panelist concluded that all he had to say could change if the government decides to eliminate subsidies on grain or reduce them materially.

SOCIAL ADJUSTMENTS FACING AGRICULTURE—Dr. J. K. McDermott, agricultural economist at Purdue University, pointed out how the rapid technological and economic changes in the poultry industry and other phases of agriculture bring marked social changes and adjustments, just as there have been social changes with changes in heavy industry.

"For years," he said, "productivity increased more rapidly in the nonfarm sector of the economy than in agriculture. Now it is increasing more rapidly in agriculture than in the non-agricultural sector, and thus agricultural adjustments must be more rapid . . . We find that as our economy develops, some people benefit, some suffer; some areas benefit, some suffer; some industries benefit, some suffer; some firms even within an industry grow rapidly, others go broke as have many automobile companies . . .

"Before we reap the benefit of much technology, a new organization has to be created to use it. And it is the revolution that is causing you the most pain, and the one all of agriculture is now fearing, the revolution in the organization of agriculture—the dread term 'integration' . . . We saw the same type of revolution in organization occur when a technological revolution hit the automobile industry a half century ago. We make speeches about the decline in the number of farms; the decline in the number of factories has been even greater. The small organization gave way to the big corporation because it took the big corporation type of organization to utilize fully the newly developed technology . . .

"A change in technology calls forth a change in the organization of an industry in order to use the technology. The next change then comes in the social life."

Dr. McDermott went on to note

(Turn to APHF, page 88)

COMMITTEE NOTES DRUG PROBLEM

ST. LOUIS—Official note of industry problems in connection with the Food and Drug Administration regulations was taken by the broiler industry committee of the American Poultry & Hatchery Federation at the APHF convention this week. The committee said it "feels that APHF should pay careful attention to government regulations concerning the limited use or prohibition of certain feed ingredients, additives or medicants which might reduce production efficiencies. Keeping in mind the welfare of the consuming public at all times is of utmost importance to our industry, but we must be certain that the research and development of new products is not stifled by prohibitive and unwarranted red tape or legislation."

The FEED MARKET

PRICE QUOTATIONS, MARKET TRENDS
OF PRINCIPAL INGREDIENTS

NOTE: Quotations on feed ingredients shown in these and adjoining columns are wholesale prices, per ton, bagged, for prompt delivery, unless otherwise noted. They are the latest quotations available from Feedstuffs correspondents and are not necessarily those in effect on date of publication. The prices represent fair average trading values and do not necessarily represent extreme low or high levels at which individual sales might have occurred. A descriptive summary of supply and demand factors prevalent in the feed market appears on page 2.

A AND D FEEDING OIL

Boston: Demand fair; supply adequate; 600 D, 1,500 A 17½¢; 300 D, 2,250 A 18¢; 300 D, 1,500 A 16½¢; 300 D, 750 A 14¾¢; 400 D, 3,000 A 20¢; 300 D, 3,000 A 19½¢; 75 D, 750 A 14½¢ lb.

Chicago: Demand fair; trend steady; supply ample; straight A feeding oil, with 10,000 units vitamin A per gram, 7@7¼¢ a million units of vitamin A, l.c.l., packed in 55-gal. drums, f.o.b. Chicago, drums included.

New York: Demand and supply good; trend firm; price per lb. in 55-gal. drums (413 to 420 lb.): 300 ICU, 750 A 13½@15½¢, 1,500 A 15½@17¢; 2,250 A 17½@20¢, 3,000 A 19@21¢; 600 ICU, 1,500 A 16@18¢, 2,250 A 18@19½¢; f.o.b. Massachusetts, New York or Pennsylvania.

Minneapolis: Demand fair; supply ample; 10,000 A 34½¢ lb.; 300 D, 2,250 A 19¢ lb.; 300 D, 1,500 A 17½¢ lb.; 300 D, 750 A 16¢ lb.

ALFALFA MEAL

New Orleans: Demand steady; trend firm; supply adequate; vitamin A, 17% $56@57; pellets $52@53.

Ft. Worth: Demand good; offerings somewhat limited on good quality; dehydrated Texas production, 17%, 100,000 A $53.80 rail; suncured 13%, ¼-in. grind No. 1 $41, truck.

Philadelphia: Demand and supply fair; trend unsettled; 17% dehydrated $59.50.

Boston: Demand good; supply spotty; 17% dehydrated $61@63; suncured, 13% $47, nominal.

Kansas City: Good demand from mixers; market free of pressure or any distress offerings; prices advanced $2 this week; mills apparently are moving all they care to ship at present time; production good; dehydrated alfalfa meal 17% protein and 100,000 units of vitamin A guaranteed on arrival—regular meal $45, reground pellets $47, greased reground pellets $49, sacked; bulk pellets $42; 18% protein and 125,000 units A meal $52, sacked; 20% protein and 150,000 A $57; suncured meal unchanged, No. 1 fine ground $37@40, No. 1 ¼-in. $35@38, No. 2 ¼-in. $32@55.

Portland: Demand good; supply ample; trend unchanged; suncured $40; dehydrated $63.40.

Cincinnati: Demand fair; trend steady; supply adequate; 17% dehydrated, 100,000 vitamin A $55.50@58.50.

Los Angeles: Demand steady; trend unchanged; supply adequate; dehydrated meal, 17% protein, 100,000 A $50, bulk; dehydrated pellet meal, 17% protein, 100,000 A $52 @53, bulk; suncured meal, 15% protein $42 @43, bulk; suncured crumbles, 15% protein $44@45, bulk.

Minneapolis: Trend strong; demand good; production down a little; 17% dehydrated, 100,000 units vitamin A, reground pellets $48@50, bulk, Minneapolis; oiled reground $50@52, bulk.

Memphis: Demand fair; trend steady; supply ample; dehydrated, 17% protein, guaranteed 100,000 units vitamin A $52.80.

Seattle: Demand fair; trend steady; supply good; 15% protein suncured $45, delivered, truck loads; 136,000 A units dehydrated $68, delivered, truck loads.

Chicago: Demand good; trend higher; supply fair; carlots, dehydrated with 100,000 units vitamin A guaranteed $53.50.

St. Louis: Demand good for dehydrated and slow for suncured; trend steady; supply ample; dehydrated 17%, 100,000 A $50; suncured, 13% fine $41.

Omaha: Demand good; trend strong; supply tight; 17% dehydrated, 100,000 A units, bulk pellets $42; sacked meal $47, both Omaha basis.

Buffalo: Demand and supply fair; trend steady to higher; $61, sacked, Boston.

ANIMAL FATS (STABILIZED)

St. Paul: Demand fair to good; trend steady; supply ample; bleachable fancy tallow 6⅝¢ lb., f.o.b. producer's plant.

Louisville: Demand very dull; trend weak; supply large; bleachable white 6⅝¢ lb.; white tallow 6⅜¢ lb.; yellow grease 6½¢ lb.

Kansas City: Demand slow; trend steady; supply ample; 6½¢ lb., tank cars, for bleachable fancy tallow.

Boston: Demand and supply steady; tallow 7¼¢ lb.; yellow grease 6⅝¢ lb.

Ft. Worth: Demand fair; supply ample; prime tallow, tank cars 6⅝¢ lb.; drums 8½¢ lb., f.o.b. north Texas packing plants with returnable drums.

New Orleans: Demand fair; trend steady; supply adequate; 6⅝@7¢ lb., tank cars.

San Francisco: Demand fair; supply ample; bleachable fancy 7¼¢ lb.; yellow grease 6¼¢ lb.

Chicago: Demand good; trend steady to easier; supply fair; bleachable fancy tallow, tank, truck or carlots, 6⅞¢ lb., yellow grease 6½¢ lb.

BARLEY FEED

San Francisco: Demand fair; supply ample; rolled $58.50; ground $57.50.

Philadelphia: Demand slow; supply fair; $47.

Boston: Demand slow; supply ample; $45 @46.

New Orleans: Demand slow; trend unchanged; supply ample; $59@60.

Portland: Demand good; trend lower; supply ample; rolled $56; ground $54.

Los Angeles: Demand slow; trend firmer; supply ample; standard rolled $2.95 cwt., sacked; standard ground $2.95 cwt., sacked.

Ogden: Supply average; rolled $52@57; whole barley $44@49.

Seattle: Demand fair; trend steady; supply good; $44, bulk, truck loads (new crop).

Baltimore: Demand good; trend steady; supply fair; $46.50 carlots.

Chicago: Demand good; trend steady; supply fair; $36 carlots.

BENTONITE (SODIUM)

Cincinnati: Demand steady; supply adequate; f.o.b. Cincinnati, minimum 30-ton carlots: 80 granular $31.50; 200 mesh fine $31.

Chicago: Demand steady; trend firm; supply adequate; f.o.b. Wyoming and South Dakota shipping points: granular, 30 mesh $16.50; fine granular, 50 to 100 mesh $13.75; powder, 200 mesh $13.50, f.o.b. Belle Fourche, S.D., minimum 30-ton carlots, 80 granular $13.50 net; 200 mesh, fine $13.25. net.

BLOOD FLOUR

Louisville: Demand dull; trend weak; supply good; $80.

BLOOD MEAL

San Francisco: Demand fair; supply ample; $6 a unit of ammonia.

New Orleans: Demand slow; trend unchanged; supply normal; $85@90.

Portland: Demand slow; supply ample; trend unchanged; $115.

Louisville: Demand slow; trend steady; supply good; $80.

Los Angeles: Demand slow; trend steady; supply light; $5.75 a unit of ammonia.

Ogden: Supply average; $100, in 100-lb. bags, f.o.b. Ogden.

Chicago: Demand fair; trend steady; supply ample; guaranteed 80% protein $130 carlots.

BONE MEAL (STEAMED)

San Francisco: Demand good; supply ample; $75.

New Orleans: Demand fair; trend firm; supply light; $95@98.

Ft. Worth: Demand good; supply moderate; $90, sacked, f.o.b. Ft. Worth, local manufacture.

Boston: Demand and supply steady; $90.

Portland: Demand good; supply ample; trend unchanged; $102.

Cincinnati: Demand fair; trend steady; supply ample; $95, Cincinnati.

Louisville: Demand dull; trend weak; supply light; $75, f.o.b. Louisville.

Los Angeles: Demand fair; trend unchanged; supply adequate; imported $78, in 20-ton lots.

Chicago: Demand fair; trend steady; supply ample; $100 in 100-lb. bags, carlots.

Buffalo: Demand good; trend steady; supply limited; $105.

Seattle: Demand good; trend firm; supply limited; $89, delivered, truck lots.

BREWERS DRIED GRAINS

San Francisco: Demand fair; supply ample; $54.

New Orleans: Demand fair; trend easy; supply ample; $48@50.50.

Ft. Worth: Demand fair; supply sufficient; 26% protein $49@50, July, delivered Ft. Worth.

Philadelphia: Demand and supply fair; trend unsettled; $50.75.

Boston: Demand steady; supply adequate; 26% $50@51, 24% $50, 22% Canadian $49.50.

Cincinnati: Demand fair; trend steady; supply adequate; $46.

Louisville: Demand slow; trend steady; supply good; $45.

Los Angeles: Demand slow; trend unchanged; supply adequate; $49.50 bulk, $53.50 sacked.

Chicago: Demand fair; trend easier; supply adequate; 26% protein $43, carlots.

St. Louis: Demand fair; trend steady; supply ample; $42.

Buffalo: Demand poor; trend steady to lower; supply good; $39.50, bulk, Boston.

BREWERS DRIED YEAST

San Francisco: Demand fair; supply good; 10¢ lb.

Boston: Demand and supply steady; 11¢ lb.

Portland: Demand good; supply ample; trend unchanged; 8½¢ lb.

Louisville: Demand fair; trend steady; supply ample; 10@10½¢ lb.

Los Angeles: Demand slow; trend unchanged; supply adequate; 10¢ lb. in 5-ton lots; 11¢ lb. in 1-ton lots; 12¢ lb. in less than 1-ton lots.

Seattle: Demand slow; trend steady; supply ample; $12 cwt.

Omaha: 10½¢ lb.

Buffalo: Demand good; trend firmer; supply fair; $9.45 cwt.

St. Louis: Demand good; trend steady; supply ample; carlots $9.50@10 cwt.; ton lots $10.50 cwt.; less than ton lots $11.50 cwt.

Milwaukee: Demand fair; trend steady; supply adequate; carlots $10@11 cwt.; l.c.l. $10.50@12.25 cwt.

Chicago: Demand fair; trend steady; supply ample; carlots $9.50@10.50 cwt.; l.c.l. $9.75@12.25 cwt.

Cincinnati: Carlots 10¢ lb.; 5-ton lots 11¢ lb.; ton lots 11½¢ lb.

Pittsburgh: Carlots 10¢ lb.; 5-ton lots 11¢ lb.; ton lots 11½¢ lb.

New Orleans: Carlots 10¢ lb.; 5-ton lots 11¢ lb.; ton lots 11½¢ lb.

New York: Carlots 9½¢ lb.; 10-ton lots 10¢ lb.; 5-ton lots 10½¢ lb.; ton lots 11¢ lb., f.o.b. New Jersey.

BUTTERMILK-CONDENSED

San Francisco: Demand fair; supply good; $5 cwt.

New Orleans: Demand slow; trend unchanged; supply average; $4.25@4.30 cwt.

Philadelphia: Demand slow; supply light; $4.25 cwt.

Boston: Demand slow; supply tight; 3¾¢ lb.

Louisville: Demand dull; trend steady; supply light; $4.25 cwt., nominal.

Los Angeles: Demand slow; trend unchanged; supply adequate; 5½¢ lb. in 100-lb. lots; 4½¢ lb. in 500-lb. lots.

Ogden: Supply normal; $4.40, 100-lb. drum.

Chicago: Demand good; trend steady; supply ample; $3.25@3.50 cwt., carlots.

CALCITE CRYSTALS AND FLOUR

(All prices net, including freight)

New York: Crystals $15.28, flour $10.28.
Buffalo: Crystals $16.11, flour $11.11.
Toledo: Crystals $17.96, flour $12.96.
Boston: Crystals $16.53, flour $11.63.
Limecrest, N.J.: Crystals $10.50, flour $5.50.

CALCIUM CARBONATE

Cincinnati: Demand fair; trend steady; supply adequate; $8@9 cwt.

Los Angeles: Demand fair; trend unchanged; supply adequate; flour $10.15; meal $11.15.

Chicago: Demand steady; trend firm; supply adequate; fine grind, plain, 100-lb. bags $9.54; bulk, in hopper cars $7.54; bulk in boxcars $8.04; granular grind $1 premium.

Seattle: Demand and trend steady; supply good; $14, ex-warehouse, truck lots.

Minneapolis: Fine grind, 50-lb. bag $12.25, 100-lb. bag $11.50; bulk, boxcar $10; bulk hopper $9.50; coarse grind $1 premium, delivered Minneapolis.

CHARCOAL

San Francisco: Demand steady; supply ample; $141.

Boston: Demand and supply steady; $100.

Los Angeles: Demand slow; trend unchanged; supply adequate; hardwood poultry $156 sacked in less than ton lots; $144.40 sacked in ton lots.

Chicago: Demand fair; trend steady; supply adequate; $110 in 50-lb. multiwalls, carlots.

COCONUT OIL MEAL

San Francisco: Demand good; supply tight; solvent $69.

Portland: Demand slow; supply ample; trend unchanged; $68.

Los Angeles: Demand limited; trend unchanged; moderate offerings; copra cake $81@82, bulk.

Seattle: Demand fair; trend firm; supply ample; $78, delivered, via truck (California).

COD LIVER OIL (FORTIFIED)

Boston: Demand fair; supply adequate; 600 D, 2,250 A 19¢ lb.; 300 D, 3,000 A 20½¢; 300 D, 2,250 A 18½¢; 600 D, 1,500 A 18¢; 300 D, 1,500 A 17¢.

New York: Demand and supply good; trend firm; price per lb. in 55-gal. drums (413 to 420 lb.): 300 ICU, 750 A 14½@15½¢, 1,500 A 18½@20¢, 2,250 A 18½@21¢, 3,000 A 21½@23¢; 600 ICU, 1,600 A 17½@19½¢, 2,250 A 20@22¢, 3,000 A 22@23¢; f.o.b. Massachusetts, New York or Pennsylvania.

CONDENSED FISH SOLUBLES

New Orleans: Demand light; supply normal; trend steady; $75@80, f.o.b. Gulf.

Boston: Demand fair; supply ample; 4½¢ lb.

Los Angeles: Demand slow; trend unchanged; supply adequate; 4½¢ lb.

New York: Demand fair; trend downward; supply tight; 3½@3¾¢ lb., f.o.b. eastern shore.

CORN GLUTEN FEED AND MEAL

(All quotations for all cities are sacked basis, bulk basis $5 less)

Minneapolis: Feed $46.90, meal $67.90.
Atlanta: Feed $52.98, meal $73.98.
Birmingham: Feed $51.64, meal $72.64.
Boston: Feed $51.84, meal $72.84.
Chicago: Feed $40, meal $61.
Cleveland: Feed $48.14, meal $69.14.
Denver: Feed $50.51, meal $71.51.
Ft. Worth: Feed $48.96, meal $69.96.
Indianapolis: Feed $45.36, meal $66.36.
Kansas City: Feed $40, meal $61.
Louisville: Feed $47.21, meal $68.21.
New Orleans: Feed $50.20, meal $71.20.
New York: Feed $52.43, meal $72.43.
Norfolk: Feed $50.71, meal $71.71.
Philadelphia: Feed $51.02, meal $72.02.
Pittsburgh: Feed $48.96, meal $69.96.
St. Louis: Feed $40, meal $61.

CORN OIL MEAL

Cincinnati: Demand fair; trend steady; supply adequate; $44.

Louisville: Demand slow; trend steady; supply normal; $47.45.

COTTONSEED OIL MEAL

San Francisco: Demand good; supply tight; 41% $76; 44% $78.50.

Ft. Worth: Demand poor; supply sufficient; 41% old process $69; solvent 1% fat added $66.50; pellets $1 additional; cottonseed hulls $21.

Philadelphia: Demand slow; supply fair; $79.50.

Boston: Demand slow; supply adequate; $79.

New Orleans: Demand fair; trend steady; supply limited; $79@80.

Kansas City: Demand moderate; trend firmer; supply limited; old process $67, sacked, Memphis; solvent $65@65.50.

Portland: Demand slow; trend higher; supply limited; $80.

Cincinnati: Demand poor; trend steady; supply adequate; new process $71.60; old process $74.60.

Wichita: Demand fair; supply sufficient; 41% old process $74.50.

Louisville: Demand slow; trend stronger; supply ample; old process $73; new process $72.

Los Angeles: Demand moderate; trend steady; supply very limited; $73, bulk.

Ogden: Supply normal; 41% $80@85.

Chicago: Demand improved; trend higher; supply fair; carlots: hydraulic $67.80, solvent $65.50, Memphis basis.

St. Louis: Demand slow; trend steady; supply limited; solvent $71.

Omaha: Demand poor; trend steady; supply ample; 41% solvent $69.10, bulk, delivered Omaha.

Buffalo: Demand poor; trend steady; supply fair; $82, sacked, Boston.

Memphis: Demand slow; trend steady; supply scarce; prime 41% protein, old process $66, nominal, sacked; new process, 41% solvent $64.50, sacked.

Seattle: Demand fair; trend firm; supply ample; $86, delivered, truck lots, 41% expeller process.

CURACAO PHOSPHATE

New York: Trend steady; ground Curacao phosphate in 100-lb. bags $48, f.o.b. cars or trucks, New Orleans, Jacksonville, Fla., or Philadelphia.

D ACTIVATED ANIMAL STEROL (POWDERED)

Kansas City: Demand fair; trend steady; supply adequate; 1,500 ICU 9⅝@10¢ lb.; 3,000 ICU 11½¢ lb.

Cincinnati: Demand fair; trend steady; supply ample; 1,500 ICU 11@12¢ lb.; 3,000 ICU 18¢ lb., warehouse.

New York: Demand and supply good; trend firm; price per lb. in 50- and 100-lb. bags, or 100-lb. drums: 1,500 ICU 8@12¢ bagged, 12@13¢ drums; 3,000 ICU 13@17¢ bagged, 17@18¢ drums; f.o.b. or delivered basis Pennsylvania, Delaware or New York.

D ACTIVATED PLANT STEROL (POWDERED)

Chicago: Demand good; supply fair; 4,000,000 U.S.P. units per lb., 15¢ lb. in ton lots, less than ton lots 17¢ lb.; 12,000,000 units per lb., 5 tons to a carload 28¢ lb., ton lots and less 30¢ lb.

DICALCIUM PHOSPHATE

Chicago: Stock food grade, 18.5% phosphorus, 20,000 lb. or more $83.25 net ton in 100-lb. papers, basis Chicago Heights, Ill., or Nashville, Tenn.; less than 20,000 lb. $93.25; 21% phosphorus, 20,000 lb. or more $94.50, basis Chicago Heights and Nashville; less than 20,000 lb. $104.50; bulk boxcars or hoppers $3 net ton less than bagged material.

Bonnie, Fla.: Minimum phosphorus 18½%, granular $83.25; freight equalized with closest producing point, carload basis.

Texas City, Texas: 18.5% minimum phosphorus, 21% minimum calcium, 24% maximum, granular $77.70 net ton, f.o.b. Texas City in 100-lb. multiwall bags; bulk, boxcars and hoppers, $3 net ton less than bagged material.

Columbia, Tenn.: Minimum phosphorus 18½%, minimum 25% calcium, maximum .01% fluorine guaranteed $83.25, f.o.b. Columbia, in 100-lb multiwall bags; freight equalized with nearest producing point, carload basis; bulk $3 ton less.

Minneapolis: 18.5% phosphorus, 24% calcium granular or fine ground $94.10, delivered; $3 less in bulk.

Trenton, Mich.: Minimum phosphorus 18½%, maximum fluorine 0.003% guaranteed $83.25, f.o.b. Trenton in 100-lb. multiwalls; minimum phosphorus 21% maximum fluorine 0.003% guaranteed $94.50, f.o.b. Trenton in 100-lb. multiwall bags.

Portland: Demand slow; supply ample; trend unchanged; $115.

Cincinnati: 18½¢ phosphorus $92@93.

DEFLUORINATED PHOSPHATE

Tupelo, Miss.: Minimum phosphorus 13%, minimum calcium 31%, maximum fluorine .12%, $51 net ton, f.o.b. Tupelo in 100-lb. multiwall bags, $48 in bulk.

Wales, Tenn.: Minimum phosphorus 18%, minimum calcium 33%, maximum calcium 36%, maximum fluorine .18% $69.12 net ton, f.o.b. Wales in 100-lb. multiwall bags, $3 less in bulk.

Coronet, Fla.: Minimum phosphorus 18%, minimum calcium 31%, maximum calcium 34%, maximum fluorine .18%; carlots $63.50, truck load $64.25, net ton, f.o.b. Coronet in 100-lb. multiwall bags $60.50 and $61.25 in bulk.

Houston: Minimum phosphorus 19%, minimum calcium 32%, maximum calcium 35%, maximum fluorine .19% $71.50, net ton, f.o.b. Houston, 100-lb. multiwall paper bags, $68.50 in bulk.

Cincinnati: 18% phosphorus $81; 13% phosphorus $64.98, f.o.b. Cincinnati.

DISTILLERS DRIED GRAINS

San Francisco: Demand fair; supply ample; solubles $85.

Philadelphia: Demand slow; trend unsettled; supply light; $62.50.

Boston: Demand active; supply tight; August shipment $61.

Cincinnati: Demand fair; trend steady; supply adequate; $52.50.

Louisville: Demand fair; trend steady; supply light; bourbon grains: light $50, dark $52, solubles $77.

Buffalo: Demand fair; trend steady; supply good; $56, bulk, Boston.

Seattle: Demand good; trend steady; supply limited; $67.50, delivered, truck lots.

DRIED BEET PULP

San Francisco: Demand good; supply fair; $51.80, bulk.

New Orleans: Demand fair; trend steady; supply limited; $62@63.
Ft. Worth: Demand slow; offerings light; carlots, 50-lb. papers $63, July, delivered Ft. Worth.
Portland: Demand good; supply scarce; trend unchanged; $59.
Boston: Demand fair; supply adequate; $59.50@60.
Los Angeles: Demand steady; trend unchanged; supply ample; molasses $47.80@50, bulk.
Ogden: Supply nominal; $44@48.
Buffalo: Demand fair; trend steady; supply adequate; $60, sacked, Boston.
Seattle: Demand good; trend firm; supply limited; $52, delivered, carlots.

DRIED BUTTERMILK

San Francisco: Demand fair; supply ample; 11½¢ lb.
New Orleans: Demand fair; trend easy; supply normal; $11.50@12 cwt.
Portland: Demand slow; supply ample; trend unchanged; 13¢ lb.
Louisville: Demand fair; trend steady; supply normal; 11½@12¢ lb.
Los Angeles: Demand slow; trend unchanged; supply adequate; 11¾¢ lb.
Ogden: Supply normal; $8.50, 100-lb. bag.
Chicago: Demand and supply fair; trend steady; carlots, $10.75@11 cwt., sweet cream $11@11.25 cwt.
Buffalo: Demand good; trend steady; supply limited; $11.85 cwt.

DRIED CITRUS MEAL

San Francisco: Demand and supply fair; $54.
New Orleans: Demand fair; trend strong; supply good; $40@45, f.o.b. Florida points.
Boston: Demand slow; supply spotty; $58.48.
Los Angeles: Demand and trend steady; supply moderate; orange pulp $43, bulk; lemon pulp $42, bulk.
Buffalo: Demand fair; trend steady; supply adequate; $37.50, f.o.b. Florida points.

DRIED SKIM MILK

San Francisco: Demand and supply fair; 13½¢ lb.
New Orleans: Demand fair; trend unchanged; supply ample; $11.50@12 cwt.
Philadelphia: Demand slow; supply light; $12.50 cwt.
Boston: Demand and supply steady; 12¢ lb.
Cincinnati: Demand fair; trend steady; supply adequate; 10½¢ lb.
Louisville: Demand slow; trend steady; supply ample; 11½@12¢ lb.
Los Angeles: Demand slow; trend unchanged; supply adequate; 14¢ lb. in less than ton lots; 13¾¢ lb. in ton lots.
Ogden: Supply normal; $15.15, 100-lb. drum.
Chicago: Demand fair; trend steady; supply ample; $10.40@10.65 cwt., carlots.
Buffalo: Demand fair; trend steady; supply ample; spray $10.65 cwt.
Minneapolis: Demand good; supply scarce; trend firm; 11¢ lb.

DRIED WHEY

San Francisco: Demand steady; supply good; $5.75 cwt.
New Orleans: Demand good; supply ample; trend steady; $6@6.50 cwt.
Ft. Worth: Demand fair; supply adequate; carlots, standard $6, sacked, delivered Ft. Worth; $6.25 ton lots, f.o.b. warehouse Ft. Worth.
Philadelphia: Demand slow; supply light; $6.50 cwt.
Boston: Demand and supply steady; 5½¢ lb., f.o.b. shipping point.
Kansas City: Demand fair; trend steady; supply adequate; regular and partially delactosed $5.50 cwt., producers' plants.
Portland: Demand slow; supply ample; trend unchanged; $7 cwt.
Cincinnati: Demand fair; trend steady; supply adequate; $6.15 cwt.
Louisville: Demand dull; trend steady; supply light; 6@6½¢ lb.
Los Angeles: Demand fair; trend unchanged; supply adequate; $6.10 cwt. in carloads; $6.35 cwt. in l.c.l.
Ogden: Supply average; $6.90, 100-lb. bag.
Chicago: Demand fair; trend steady; supply good; $5.50 cwt., carlots.
Minneapolis: $5.50 cwt., delivered.
Seattle: Demand and trend steady; supply good; $6.40 cwt., ex-warehouse, l.c.l.

FEATHER MEAL (HYDROLYZED)

Ft. Worth: Demand excellent; supply very limited; 85% to 87% protein $98, f.o.b. trucks, north Texas plants.
Boston: Demand and supply nil; withdrawn.
Los Angeles: Demand fair; trend unchanged; supply adequate; $1 a unit of protein.
Salisbury, Md.: Demand good; supply limited; $98, f.o.b. bulk, sacked $4 more.

FISH MEAL

Ogden: Supply average; $2.20 a unit, f.o.b. Coast; 65% $176@178.
Los Angeles: Demand slow; trend weaker; small offerings; local production, 60% protein $2.17½@2.20 a unit.
Louisville: Demand slow; trend steady; supply light; $160, nominal.
Cincinnati: Demand fair; trend steady; supply adequate; $160.
Portland: Demand slow; supply ample; trend unchanged; $2.10 a unit.
Boston: Demand fair; supply ample; $130, f.o.b. Gloucester.
Ft. Worth: Demand fair; supply sufficient; 60% menhaden $128, f.o.b. Gulf ports.
New Orleans: Demand fair; trend steady; supply normal; menhaden 60% $128@130; scrap $124@126, f.o.b. Gulf.
San Francisco: Demand slow; supply ample; $2.07½ a unit of protein.
Seattle: Demand and supply good; trend steady; $2.10 a unit protein, ex-dock (new crop Alaska).
Chicago: Demand and supply fair; trend steady; carlots: eastern menhaden $129@130, Gulf $128@130; scrap, eastern menhaden $124@129, Gulf $124@129; eastern white fish $133; herring meal $2.10 a unit of protein up to 73%; northeast red fish $130@133.
Minneapolis: Demand and supply fair; trend steady; Gulf menhaden $148, delivered; 60% blended $130; 70% herring $2 a unit, West Coast.
Buffalo: Demand fair; trend steady; supply ample; 60% protein menhaden $140 bulk, $145 sacked.

HAY

Ft. Worth: Demand fair for alfalfa, practically nil for prairie and Johnson grass; carlots, baled, No. 1 alfalfa $36@38, No. 2 $34@36; No. 2 prairie $26@28; No. 2 Johnson grass $24@26, delivered Texas common points.
Philadelphia: Demand slow; supply light; $25@26.
Boston: Demand good; supply fair; No. 2 timothy $41@43.
Portland: Demand good; supply ample; trend unchanged; $32.
Los Angeles: Demand steady; offerings light; U.S. No. 1 $31@33; U.S. No. 2 leafy $29@30; U.S. No. 2 green $29@30; U.S. No. 2 $26@27.
Ogden: Supply normal; $1@1.25 bale; $20 ton in the field.
Louisville: Demand very dull; trend weak; supply good; No. 1 local hay, any variety $23@25, No. 2 about $2 less; straw $18@20.
Wichita: Demand good for prairie, fair for alfalfa; supply short for prairie, sufficient for alfalfa; prairie $19, alfalfa $15@18.
Cincinnati: Demand fair; trend steady; supply adequate; No. 1 timothy $24; No. 1 second cutting green alfalfa $31; mixed $27; wheat or oat straw $19.
Seattle: Demand good; trend firm; supply fair; alfalfa, U.S. No. 2 green (new crop) $32, delivered, truck lots.

HOMINY FEED

Cincinnati: Demand good; trend steady; supply adequate; $45.
Louisville: Demand slow; trend easy; supply light; $50.
Kansas City: Demand good; trend firm; supply light; yellow $41@41.50, bulk; $4 additional for sacks; white $1 less.
Boston: Demand slow; supply adequate; $48 bulk.
New Orleans: Demand slow; supply adequate; trend steady; $52@52.50.
Memphis: Demand poor; trend steady; supply adequate; white $45.50, yellow $45.50.
Seattle: Demand fair; trend firm; supply good; $57, delivered, sacked, carlots.
Buffalo: Demand fair; trend steady to higher; supply good; $49, bulk, Boston.
St. Louis: Demand slow; trend steady; supply good; $45.
Chicago: Demand and supply fair; trend upward; $44 carlots.

LINSEED OIL MEAL

Los Angeles: Demand moderate; trend unchanged; supply limited; local production, 29% protein $71, bulk.
Louisville: Demand slow; trend easy; supply ample; old process $80.50; new process $70.50.
Wichita: Demand good; supply sufficient; 34% $82.50.
Cincinnati: Demand poor; trend steady; supply adequate; new process $80; old process $90.
Portland: Demand slow; supply ample; trend unchanged; $87.
Philadelphia: Demand slow; trend unsettled; supply fair; 34% $83.50.
Kansas City: Demand limited; supply moderate; trend easier; solvent $61.50@62, bulk, Minneapolis; no old process offered here.
Boston: Demand slow; supply plentiful; 34% $84.
Ft. Worth: Demand slow; supply sufficient; Texas production, 34% old process $81.50, rail or truck.
New Orleans: Demand slow; supply ample; trend steady; $80@81.
San Francisco: Demand fair; supply ample; $75.
Omaha: Demand fair; trend steady; supply tight; 34% solvent $63.70, bulk, Omaha basis; 32% old process not available.
Chicago: Demand fair; trend easier; supply ample; solvent $61.50, carlots, Minneapolis basis.
Minneapolis: Demand fair; supply ample; trend steady; solvent $61@61.50, nearby, bulk, Minneapolis; September-December $64.
Seattle: Demand fair; trend steady; supply limited; 34% protein (Montana) $90, delivered, carloads.

MALT SPROUTS

New Orleans: Demand fair; trend steady; supply ample; $40@42.
Boston: Demand and supply limited; $42.50.
Cincinnati: Demand fair; trend steady; supply adequate; No. 1 $42.
Chicago: Demand improved; trend higher; supply fair; No. 1, carlots, uneven weight bags $34.50, bulk $27.50.

MEAT AND BONE MEAL

New York: Demand good; trend steady; supply tight; 50% $80, 55% $87.50, bulk; 50% $82.50, 55% $90, sacked.
Chicago: Demand good; trend steady; supply adequate; $95, 100-lb. bags, carlots.
St. Louis: Demand slow; trend lower; supply ample; $88.
Omaha: Demand slow; trend easy; supply ample; scraps $92.
Buffalo: Demand fair; trend easier; supply ample; scraps, 50% $87.50 bulk, $92.50 sacked.
St. Paul: Demand slow; supply ample; downward trend; $87.50@92.
Boston: Demand steady; supply plentiful; $1.40 a protein unit; converted 50% $82.50.
Louisville: Demand dull; trend weak; supply good; $80.
Ogden: Supply normal; $97.50 ton in 100-lb. bags.
San Francisco: Demand fair; supply ample; scraps $1.85 a unit of protein in bulk.
New Orleans: Demand easy; supply ample; trend steady; $90@93.
Ft. Worth: Demand fair; supply sufficient; meat and bone, 50% $89.50, f.o.b. or delivered Ft. Worth.
Kansas City: Demand moderate; trend steady; supply light; 50% meat and bone meal $87.50@90, bulk; $2.50 more for sacked.
Portland: Demand good; trend higher; supply ample; $1.75 a unit.
Cincinnati: Demand fair; trend easy; supply ample; 50% meat and bone scraps $89.50, Cincinnati.
Wichita: Demand good; supply adequate; 50% $87.50, f.o.b. plant; 55%, no quotations, no offerings.
Los Angeles: Demand slow; trend steady; supply ample; scraps, 50% protein $1.85 a unit, bulk.
Seattle: Demand good; trend steady; supply ample; scrap, 50% protein $97.50, ex-warehouse.

MILLFEED

Minneapolis: Demand good; supply very tight; stronger trend for middlings and bran; middlings $37@37.50; bran $34@34.75; red dog $50@51.
Kansas City: Demand mixed, with sacked feeds moving better than bulk; mill door and local demand good, but some apathy evident from mixer group, which in some cases were holding up directions on old orders; some resale of bulk middlings indicated; bran $30.50@31.25, shorts $37.75@38.50, sacked; bran $26.25@27, middlings $30@30.75, shorts $32@32.75 bulk.
Wichita: Demand good; supply inadequate; basis Kansas City: bran $30.25@30.75, shorts $36.25@37.25; bran advanced 50¢ and shorts $1@1.50, compared with the preceding week.
Ft. Worth: Demand excellent; offerings light; carlots, burlaps, bran $40, gray shorts $47; bulk middlings $39.50, delivered Texas common points; unchanged on bran, $2 higher on shorts and unchanged on middlings compared with previous week.
Chicago: Bran and standard midds. did not follow identical price patterns in this area during the week ending July 22. Sacked bran was off about $1 ton on the low end of the range, while in the case of middlings the sacked commodity was from $1@1.50 ton higher compared with a week back. Red dog continues to be a premium article compared with other millfeeds, although recorded gains in price were not nearly as broad as they have been all through the current month up to now. Bulk red dog was a little hard to get. Quotations, carlots: standard bran, sacked $36.50@38 and bulk $33; standard midds., sacked $41.50 and bulk $36; red dog, sacked $55.50.
Omaha: Demand fair; trend steady; supply ample; sacked bran $32; sacked gray shorts $38; bulk standard midds. $31.50, all Omaha basis.
Cincinnati: Demand fair; trend steady on bran, middlings higher; supply adequate; bran $40.50, middlings $47.50.
St. Louis: Bran, sacked $36@36.50, bulk $31.25@31.75; shorts, sacked $43.25@43.75, bulk $37@37.50, middlings $35@35.50.
Memphis: Demand fair; trend steady; supply ample; wheat bran $38.50, sacked; gray shorts $43.80, sacked; standard midds. $38.80, bulk.
Boston: Demand fair; supply adequate; bran $46, middlings $51.
Buffalo: Trading was dull and the market was quiet with lower prices evident. There were plenty of supplies around with no incentive to stock pile. Trading beyond spot was limited as there wasn't a lot of spot supplies pressing. Middlings were discounted under western middlings prices and bran was on even money with the westren bran market. Middlings discounted for about $1@1.50. Bran and middlings were off $1 from last week. Red dog advanced $2.50. Quotations July 22: bran, bulk $31.50@32, sacked $36@36.50; middlings, bulk $37.50@38, sacked $42@42.50; red dog, bulk $54@54.50, sacked $58.50@59. The bulk differential over sacked was $4.50.
Philadelphia: Demand spotty; supply fair; bran $45, standard midds. $48, red dog $67.
New York: Demand fair; trend steady; supply good; bran $44.50@45, standard midds. $50.50@51.
New Orleans: Demand fair; trend steady; supply normal; bran, sacked $41.50@42, bulk $37@37.75; shorts, sacked $46.50@47, bulk $43.75@44.50.
Louisville: Demand fair; trend slightly higher; supply good; bran $41.60; mixed feed $45.60, shorts $50.10, middlings $48.80.
Ogden: Supply average; to Utah and Idaho: red bran and mill run $40, middlings $45; to Denver: red bran and mill run $47, middlings $52; to California: red bran and mill run $47.50, middlings $52.50, f.o.b. San Francisco and Los Angeles.
Seattle: Demand good; trend strong; supply limited; $43, delivered common transit points, carlots.
Portland: Demand good; trend higher; supply limited; $37.
Los Angeles: Standard mill run $44, bulk.

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better demand, firmer trend, shorter supplies; red bran $45@45.50, bulk, fair demand, firmer trend, ample supplies.

San Francisco: Demand good; supply tight; millfeed $45.50; red bran $47.

MINERAL FEED

San Francisco: Demand steady; supply good; all-purpose with iodine $70.

Ft. Worth: Demand fair; supply sufficient; all-purpose granules $90, block $97; mineral phosphorus 6% granules $106, block $113; cattle-sheep mineral 7% phosphorus granules $100, block $107; hog mineral phosphorus 2½% granules $87, phosphorus 2% $77 (all in 50-lb. paper bags).

Portland: Demand good; supply ample; trend unchanged; $45.

Wichita: Demand fair; supply ample; all-purpose with iodine, 50-lb. blocks $97.50, 100-lb. bags $92.50, f.o.b. plant.

Ogden: Supply average; $113 ton in 50-lb. blocks; $103, granular, 50-lb. bags.

Sioux City: 50-lb. mineral blocks 8.2% phosphorus $92; 7.5% phenothiazine sheep mineral blocks $4 each.

Seattle: Demand fair; trend steady; supply good; mixer mineral $48, ex-warehouse; all-purpose mineral $85, ex-warehouse.

MOLASSES

San Francisco: Demand and supply good; $21.50, f.o.b. cars, Richmond, Cal.

Ft. Worth: Demand fair; supply sufficient; blackstrap 12½¢ gal., f.o.b. Houston; delivered Ft. Worth, truck $28.07, seller's market price on date of shipment.

New Orleans: Demand good; supply ample; trend steady; 11⅝¢ gal., tank cars and trucks; 600-lb. customers' drums $8.30.

Boston: Demand steady; supply plentiful; 16½¢ gal. in tank cars.

New York: Demand fair; trend steady; supply good; blackstrap 16¢ gal., tank cars, tank wagons, f.o.b. New York.

St. Louis: Demand slow; trend steady; supply ample; 11½¢ gal., New Orleans.

Buffalo: Demand fair; trend steady; supply adequate; 16½¢ gal., f.o.b. Albany.

Minneapolis: Demand fair; supply adequate; $33, tank trucks, delivered.

Kansas City: Demand fair; some inquiry for forward shipment reported for October-December positions; trend easier; 11¼@11½¢ gal., tank cars, New Orleans, for spot; October-December 11⅝¢ gal.

Cincinnati: Demand fair; trend steady; supply adequate; 11⅝¢ gal., New Orleans.

Louisville: Demand dull; trend steady; supply ample; 11¼¢ gal., tank car lots, f.o.b. Gulf ports.

Los Angeles: Demand good; trend steady; supply adequate; $21.50, bulk, f.o.b. tank cars; $21.75, bulk, f.o.b. tank trucks.

Memphis: Demand poor; trend lower; supply ample; blackstrap 11½¢ gal., tank car, f.o.b. New Orleans, and $26.50, delivered Memphis, truck.

Seattle: Demand fair; trend easy; supply good; $21.50, f.o.b. Seattle, tank car lots or truck lots.

NIACIN

New York: Trend steady; 1¢ kilo, 10-kilo lots; $6.20 kilo, 5- and 2½-kilo lots; $6.30 kilo, 1-kilo lots; freight prepaid or paid to destination.

OAT PRODUCTS

Chicago: Demand fair; trend easier; supply ample; reground oat feed $21, No. 1 fine ground feeding oatmeal $80, feeding rolled oats $79@82, carlots.

Minneapolis: Demand slow; supply adequate; options off on all markets; buyers waiting to see how new crop shapes up; reground oat feed $23; feeding rolled oats $81; feeding oatmeal $69.50; standard pulverized $46; crimped $61.

Ft. Worth: Demand slow; supply sufficient; 11% protein oat millfeed $40@41; reground $29.50@30, August.

Boston: Demand active; supply spotty; white pulverized $56; reground oat feed $26, nominal.

Philadelphia: Pulverized white $52.50, demand slow, supply fair; oat feed $32.50, demand slow, supply fair; Canadian oat feed $33.50, demand slow, supply light.

Portland: Demand good; supply ample; trend unchanged; rolled $66, ground $63, cleaned $65.

Cincinnati: Demand poor; trend steady; supply adequate; reground oats $28, pulverized white oats $51, rolled oats $81.

Louisville: Demand slow; trend slightly higher; supply ample; reground $29.30, rolled $85.80, feeding $78.80, pulverized $52.30, crimped $70.30.

Los Angeles: Demand fair; trend unchanged; supply adequate; pulverized, local production $61, sacked.

Seattle: Demand and supply fair; trend firm; $55, bulk, delivered, truck lots.

Memphis: Demand poor; trend lower; supply ample; 3¼% protein, reground oat feed $27.80.

OYSTER SHELL

Los Angeles: Demand fair; trend unchanged; supply ample; $14.80, sacked.

Louisville: Demand and supply good; trend steady; in 80-lb. paper $23.45; in 50-lb. paper $23.70; in 25-lb. paper $25.95.

Cincinnati: Demand fair; trend steady; supply adequate; $24.45.

Portland: Demand good; supply ample; trend unchanged; western $34, eastern $39, granite grits $28, shell flour $24.

Boston: Demand and supply steady; in paper $26.02.

New Orleans: Demand and supply good; trend steady; $24.50@25.

San Francisco: Demand fair; supply ample; local $15, eastern $26.

Seattle: Demand and trend steady; supply good; eastern $36, delivered, carlots.

PEAT MOSS

Chicago: Demand fair; trend steady; supply good; standard 7½ cu. ft. bales $3.80.

Los Angeles: Demand slow; trend unchanged; supply adequate; Canadian 6.1 cu. ft. bales $3.75.

Seattle: Demand and supply good; trend firm; $2.80 bale, delivered, truck lots.

Portland: Demand slow; supply ample; trend unchanged; $3 bale.

Philadelphia: Demand slow; supply fair; $2.90 bale, f.o.b. pier.

Boston: Demand and supply steady; $3.15 bale.

San Francisco: Demand and supply fair; $3.65 bale.

POTASSIUM IODIDE, U.S.P.

Chittenango, N.Y.: Demand good; supply adequate; 90% KI stabilized with calcium stearate, 200 lb. in 100-lb. cartons $1.30; 100-lb. cartons $1.32; 25-lb. cartons $1.45; freight paid to destination.

Cincinnati: Demand good; trend steady; 90% KI in calcium stearate or carbonate mixtures: 250-lb. drums $1.35; 200 lb. in 100-lb. drums $1.35; 100-lb. drums $1.38; 25-lb. drums $1.41, f.o.b. Cincinnati.

POULTRY BY-PRODUCTS

Ft. Worth: Demand excellent; supply very limited; 55% protein $98, f.o.b. north Texas plants.

Boston: Demand fair; supply improved; $88, f.o.b. shipping point.

Los Angeles: Demand fair; trend unchanged; supply adequate; offal meal $1.65 a unit of protein.

Salisbury, Md.: Demand good; supply limited; meal $98, f.o.b. bulk.

RIBOFLAVIN

New York: Trend steady; feed grade (in feed supplements) 4½¢ gm. in 3.36 to 16 gm./lb. mixtures, freight prepaid or paid to destination.

Cincinnati: Trend steady; feed grade (in feed supplements) 4¢ gm. in less than ton lots, in 3.36 to 16 gm./lb. mixtures; 3¢ in ton lots or more, freight prepaid or paid to destination.

RICE BY-PRODUCTS

Los Angeles: Demand steady; trend unchanged; supply limited; California production, high fat content $51, sacked.

Ft. Worth: Demand slow; offerings light; carlots, rice bran $33@34, f.o.b. south Texas rice mills; hulls $6.50, f.o.b. mills.

San Francisco: Demand good; supply ample; bran $46; polished $49.

SCREENINGS

Minneapolis: Demand very strong; very little free screenings available; most Canadian supplies sold as fast as offered; no domestic screenings available; Canadian $19@20, Duluth; Canadian ground $28, lights $6@16, mediums $17@27, heavies $27@36.

Buffalo: Demand good; trend higher; supply fair; ground, sacked $32, New York, lake and rail; unground, bulk $26.25, New York.

Chicago: Demand improved; trend upward; supply fair; carlots, ground grain screenings $30.25; Canadian $22.

Ft. Worth: Demand nil; supply light; ground grain $30@32.

Cincinnati: Demand fair; trend steady; supply adequate; ground grain screenings $34.

SOFT PHOSPHATE WITH COLLOIDAL CLAY

Atlanta: $20.40@20.67.
Buffalo: $25.31@25.45.
Chicago: $24.77@24.90.
Cincinnati: $23.47@23.60.
Des Moines: $25.23@25.35.
Kansas City: $24.88@25.
Memphis: $22.20@22.47.
Minneapolis: $25.92@26.06.
Philadelphia: $24.32@24.95.
St. Louis: $24.14@24.27.

SORGHUMS

Ft. Worth: Demand fair; offerings light on account of rains delaying harvest; carlots, bulk, No. 2 yellow milo $2.14@2.16, delivered Texas common points.

Los Angeles: Demand steady; trend weaker; supply adequate; milo $2.32½ cwt., bulk.

SOYBEAN OIL MEAL

Omaha: Demand slow; trend steady; supply ample; 44% $62.60, bulk, delivered Omaha.

St. Louis: Demand slow; trend steady; supply ample; 44% $66.

Chicago: There was more of a leveling off tendency in the price structure for soybean oil meal during the week ending July 22. Offerings were more plentiful than they had been. Apparently the specter of possible shut-downs by various down-state processing plants appears to have evaporated to quite a degree. In other words, there has been a little reselling by some people who had been worried over the prospect of lessened supplies because of anticipated shut-downs, but who, in the meantime, find that the plants are still running. Another item that has helped to temper bullish enthusiasm in the cash meal market has been the way that the futures have been acting recently. Not long ago, it looked as though July meal might go through the roof but all during the past week rallies in the maturing position have been very hard to maintain and when it "went out" last Wednesday (the final day for pit liquidation in that month), the price was down from $1.10@1.70 ton from the high point on the crop. Market for bean oil meal was showing weakness at mid-week with price levels off all the way from $1@3 ton compared with previous Wednesday. Quotations: 44% protein, Decatur basis, carlots: unrestricted $58@59; eastern restricted $56; 50% protein, unrestricted $66@66.50 and eastern restricted $64.50.

Minneapolis: Demand strong; supply good; trend firm; $53@54, bulk, Decatur, for shipment to Minneapolis.

Memphis: Demand good; trend steady; supply ample; prime 44% solvent $66, sacked, f.o.b. Memphis.

Seattle: Demand fair; trend firm; supply ample; $87, delivered, carlots.

San Francisco: Demand good; supply ample; $84.40.

New Orleans: Demand slow; supply ample; trend steady; $68@69.

Ft. Worth: Demand slightly improved; supply sufficient; carlots, southern origin, 44%: July $71.10, August $71.60; 50% protein, July $81.10, August $81.60; truck, 44% $71@72.

Boston: Demand slow; supply ample; 44% $56, 50% $64, both bulk, f.o.b. Decatur.

Kansas City: Demand moderate, with some inquiry from mills in this area; trend a bit easier, with a little more desire to sell unrestricted meal; 44% protein for Kansas City area; $57.50@58, bulk, Desatur; unrestricted $58@58.50.

Philadelphia: Demand and supply fair; trend unsettled; 44% $56.50, bulk, Decatur.

Portland: Demand moderate; trend unchanged; supply ample; $54.50, f.o.b. Decatur.

Cincinnati: Demand poor; trend slightly easier; supply adequate; $58, bulk, Decatur.

Wichita: Demand good; supply ample; 44% $68, 50% $76, f.o.b. Wichita.

Louisville: Demand slow; trend steady; supply normal; $73.30.

Los Angeles: Demand slow; trend weaker; larger offerings; $79.90@80.40, bulk.

Ogden: Supply normal; $84@89.

TANKAGE

Chicago: Demand good; trend steady; supply ample; 60% protein, carlots $95.

St. Louis: Demand slow; trend lower; supply ample; $88.

Omaha: Demand slow; trend easy; supply ample; $94.

St. Paul: General weakening; demand slow; supply ample; $87@90.

Louisville: Demand good; trend weak; supply good; 60% $80.

Wichita: Demand good; supply adequate; 60% $92.50, f.o.b. plant.

Cincinnati: Demand good; trend steady; supply fair; 60% digester $88.50, Cincinnati.

Kansas City: Demand moderate; trend steady; supply light; 60% digester $85@90 bulk, sacked $2.50 higher.

New Orleans: Demand good; trend steady; supply light; $97@99.

Ft. Worth: Demand fair; supply light; 60% digester $90, Ft. Worth.

VEGETABLE AND ANIMAL FAT (HYDROLYZED)

Ft. Worth: Demand excellent; limited offerings; 6¢ lb., f.o.b. north Texas area.

VITAMIN E FEED SUPPLEMENT

Cincinnati: Demand good; trend steady; any quantity in 100-lb. drums $1.50; in 25-lb. drums $1.55; freight allowed to destination.

New York: Demand and supply good; trend steady; 100-lb. drums $1.50 lb., 25-lb. drums $1.55 lb., f.o.b. manufacturing plants, freight allowed and goods insured to destination.

Rochester, N.Y.: Demand and supply good; trend steady; 100-lb. drums $1.50 lb., 25-lb. drums $1.55 lb., f.o.b. manufacturing plants, freight allowed and goods insured to destination.

WHEAT GERM MEAL

Buffalo: Demand fair; trend steady to higher; supply fair; commercial grade $57, sacked, f.o.b. Buffalo.

Minneapolis: Demand fair; supply ample; trend steady; $56.

New Orleans: Demand fair; trend steady; supply fair; $66@68.

Buy and Sell Through WANT ADS

Oil Meal Futures Steady to Lower

MEMPHIS, TENN.—A quiet week was experienced in oil meal futures on the boards of the Memphis Board of Trade this week.

Widespread rains hit many of the principal producing areas for soybeans in the mid-South. This broke a drouth that had been worrying producers.

On the basis of the rains and a wait-and-see attitude of traders, oilseed meal futures were steady to lower, compared with a week earlier.

Late in the week there was uneasiness and uncertainty in trading, with the result that traders stood aside while the July soybean contract was being liquidated in Chicago.

Trading during the week was extremely light.

Unrestricted soybean oil meal closed the period in the current August contract $1 per ton lower.

APHF

(Continued from page 86)

how production of broilers has expanded extremely fast, even with lower and lower prices, as costs have been cut. However, he said, "somebody is going to have to quit raising broilers just as someone had to quit producing automobiles, and many in the past have had to quit broilers."

"This picture," he continued, "is true in almost all of agriculture. Someone is going to have to quit production. But who? Some are giving up, but others are looking for still further innovation. The situation now is such that all interests are being threatened, and almost all interests are fighting for survival. In some cases it is the central market. In other cases, it's a feed company. In still other cases, it's a farm organization, or a retail outlet in order to meet competition must look for dependable supplies of high quality produce. But whoever it is, he is trying out new ways of organizing. Technology has made possible new ways to compete, and it is well known that only the first who takes up an innovation really profits from it. Those who follow have to do so to keep alive . . .

"Is this a bleak picture? Today it is, for you. Yet this is the way we have become the most advanced nation in the world. Many of our farmers who were forced out of agriculture in Indiana now are earning good pay building the television sets, the bathtubs and the other things the consumer has told us through prices he wants. And these displaced food producers are making as much as they ever did in agriculture . . . Our wagon makers all got jobs working for someone else. Young men now drive trucks rather than go to work for railroads. What I'm trying to say is that this is the way we get so-called economic progress. We may like it to slow down, but few of us want to stop it. Our economic progress comes at a cost to someone; it always has. And the faster it comes, the higher the costs . . .

"The adjustment in agriculture will be constant. Some will adjust to larger units, to new product lines, hogs, for example. For some the adjustment will be completely out of agriculture. But the fact remains that we are still in our revolution. We have not reached the end; whether we like it or not makes little difference, and there is no glossing over the fact."

In other program features, a 30-ft. long flannelgraph was used to diagram the control of CRD, Newcastle and coccidiosis by Dr. Morris Cover of the University of Delaware, Dr. R. P. Hanson of the University of Wisconsin, Dr. Dale J. Ritchey of the University of Georgia and Dr. Glyde Marsh of Ohio State University. Prof. Jack Insko of the University of Kentucky showed hatcherymen that carelessness does not pay in hatchery sanitation.

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ARSENICALS

(Continued from page 1)

plosive' from a public relations standpoint.

"4. AFMA realizes that the present situation is most tedious and very 'trying.' We appreciate the plight of many of our members and ask for your indulgence and patience. We are doing everything possible, along with the Animal Health Institute and individual feed additive suppliers, to bring about a reasonable solution at the earliest possible date.

"The AFMA Board has retained the services of Bradshaw Mintener, an eminently qualified Washington, D.C. lawyer. Mr. Mintener is a former assistant secretary of the Department of Health, Education and Welfare and has had years of experience in dealing with Food and Drug problems. He also understands and appreciates the predicament of the feed industry since he is a former general counsel for one of the country's leading feed manufacturers.

"5. We again want to emphasize the need for a unified industry approach to this problem. Uncoordinated and divergent efforts on the part of individual manufacturers, even though well intended, could precipitate additional complications."

INTEGRATION

(Continued from page 1)

where the producer owns both production and marketing facilities, also were discussed in the report. These may have cost advantages over both contract production and contract quality-control programs and may grow in number. This is of significance to the feed industry, too, since many of these operators make their own feed.

Also, feed firms not now in egg programs were, in effect, warned that contractual arrangements among feed companies, hatcheries and egg buyers are likely to make it more difficult for the three segments of the industry to operate independently.

At the same time, the report cautioned that sound programs will base plans on realistic prospective prices for eggs.

The author of the report is Dr. Ralph Baker, professor of agricultural marketing at Pennsylvania State University, who was employed by USDA to make the study. (Some of his findings were summarized earlier in an article which appeared in the April 4 issue of Feedstuffs.)

29 Firms Interviewed

To obtain information for the report, managers of 29 firms carrying on coordinated programs were interviewed during the summer and fall of 1958. Seventeen of the firms—eight of them producers' cooperative marketing associations—make contracts with producers to supply them eggs under a supervised program of quality control. Seven of the 29 firms contract with farmers to produce eggs from flocks which the firm supplies; the firm also supervises management of the flocks. The remaining five sample firms themselves own and operate large-scale egg producing establishments and also market the eggs.

The many different programs were classified under three categories:

Contract marketing and quality-control programs involve contracts to **market** eggs on a specification basis. They operate in all areas. They emphasize production practices to obtain uniformly high quality eggs and usually pay producers a premium for these eggs. Continued expansion of these programs is expected, particularly in the Northeast, Midwest and Far West.

Contract production programs involve a contract to **produce** eggs under specified conditions. They operate largely in the South. They, too, emphasize high quality eggs. The pullets and feed are furnished producers by the program operator. Producers furnish housing and labor. The eggs belong to the program operator. Producers are usually paid on the basis of number of eggs produced, with bonuses for high or efficient production. This type of production will likely increase in the South and other relatively low income areas. Contract production is not likely, said the report, to account for as high a percentage of total egg production at any time in the foreseeable future as it did of 1958 broiler production.

In owner-integrated operations, the producer owns both production and marketing facilities. He may emphasize both production and marketing, or he may confine most of his actvities to a well coordinated production operation. Direct sales from producers to consumers would be included in this group. Farmer cooperatives might be included in this group, but cooperatives differ from one another and are included in the broader classifications. Emphasis in this portion of the study was limited to individual operations of 100,000 or more laying hens. The largest flock studied contained 250,000 hens. There were at least nine of this type of operation in the U.S. in 1958 with more than 100,000 layers each.

These nine flocks produced less than .5% of the nation's table eggs in 1958. However, it may be noted that only about 1,000 flocks of this size would produce the nation's total table egg requirements at the 1958 rate of consumption.

Dr. Baker said that well managed, large owner-integrated organizations can minimize overhead, selling and other multiunit costs. A small net return per dozen will result in a relatively large net return for the whole operation. Therefore, he said, many of these organizations may develop, particularly near larger cities.

CONTRACT EGG MARKETING AND QUALITY CONTROL PROGRAMS—The volume of eggs handled by each of the firms in this category ranged from less than 1,000 to more than 30,000 cases per week. These programs were started either from specific problems of the marketing firm or the desire of feed or chick suppliers to sell their products.

Methods of quality control were outlined in the report. These covered such things as egg cleaning, refrigeration, breeds and strains of birds, maximum age of layers, feeding requirements, confinement of layers, frequency of gathering eggs, vaccination for respiratory disease, in some cases oil treating, grading and packing and delivery or pick-up of eggs.

It was noted that the brand of feed manufactured by the egg buyer was required in six of the 17 programs studied. Another program operator strongly recommended that producers buy the feed sold by a feed manufacturer who had assisted in developing the contract quality-control program. In other instances, any well balanced feed which produced a relatively light yolk color could be used.

A preference for a minimum flock of 500 hens was generally indicated in midwestern programs. In other areas, larger minimums were specified, or the programs included only relatively large flocks.

Most independent organizations did not require signed agreements. There was merely an oral agreement to follow specified practices. Most cooperatives required signed marketing agreements. Most written agreements were for a year, with automatic renewal unless either party gave notice of intention to terminate the contract. Most contracts provided for automatic termination if production practices or eggs did not meet specifications.

Buyers did little financing of producers on quality-control contracts. Most of the firms selling feed gave short time credit. A few firms financed the feed for growing replacement birds. In one program in the Southeast, some producers had a feed financing program with a feed company other than the contracting firm. In another southeastern program, the contracting firms grew the pullets and permitted producers to pay for them during the egg production period.

All programs had some means of farm inspection.

Prices paid by independent operators were generally based on a specific quotation. Cooperative organizations generally paid premiums above regular pool prices.

Northeastern producers on quality control programs received considerably higher prices than producers in the Midwest or on the West Coast. The midwestern-northeastern difference was considerably greater than the cost of transporting eggs to the deficit Northeast.

In all areas except the Southeast, most program producers had been in the egg business before the programs were started. One of those in the Southeast was developed by a feed company which also marketed eggs.

CONTRACT PRODUCTION PROGRAMS—Seven of these programs were included in the study, and all were independent firms in the Southeast. Only one was in the market egg business prior to beginning of the contract program. Two of the operators were feed manufacturers and two were feed dealers. All were selling most of their eggs in nearby markets but only four of them were cartoning eggs. Some 800,000 hens were in the seven contract production programs in 1958. Numbers ranged from 50,000 to 200,000 in the various programs.

Feeding practices in each program were highly standardized. Only one brand of feed was fed in each. Four programs used national brands, but three manufactured their own feed.

Flock sizes ranged from 600 to 10,000, with most in the 2,000 to 4,000 bird range.

Most agreements ran for the laying period of the specific flock of pullets placed with the producer. All provided that the contractor could discontinue the arrangement at any time. A few flocks had been removed for poor management.

Out-of-pocket costs to producers involved payment for houses, equipment, litter, nesting materials and electricity. Producers had the responsibility of obtaining necessary financing to participate. Most needed funds were obtained from local banks or other local agencies.

All programs had field men.

Each program differed from the others in producer payment details. One paid producers $150 for the first month and $200 a month thereafter for each unit of 2,000 hens. The remaining six programs paid producers on the number of eggs produced. Base payments for clean, sound shell eggs ranged from 5 to 7½¢ doz. Five included incentive payments for efficient production, and the sixth was developing an incentive plan in 1958. In addition, most of the programs permitted producers to consume some of the cracked eggs. The manure also belonged to the producer.

Few producers in the contract production programs had been in commercial egg production before. In the seven programs studied, most of the producers had started since 1955. Many other similar programs have started in the South in recent years.

OWNER-INTEGRATED OPERATIONS—An important part of total egg production is marketed directly by producers to retailers or consumers. Some of the operations are very large, with the producers delivering cartoned eggs directly to stores. Retail routes also are important in some areas.

Emphasis in this portion of the report, however, was placed on operations of 100,000 or more hens. Of the five operations used as examples, two were in the Northeast, and one each in the Midwest, Southeast and West Coast. Each operation differed from the others.

Operation 1 was a corporation formed by a hatchery operator and a local feed manufacturer. It included 100,000 hens at 16 locations. All eggs were sold through a broker. Prices were based on the New York Urner-Barry Extra Fancy Heavy-Weight White egg quotation.

Operation 2 was a corporation formed by non-agricultural businessmen to produce market eggs. There were facilities for 150,000 hens on

TOP OF THE HOPPER

(Continued from page 2)

pricing, careful comparisons of the merits of different potential sites from this strandpoint apparently are getting as much attention as sales potential at the locations.

▼ ▼

"COMMENTS ON THE FOOD AND DRUG situation by our trade press have been useful and constructive," writes E. G. Cherbonnier, feed advisor for the Grain & Feed Dealers National Assn. in a recent Feed & Feeding Digest bulletin. "There is no doubt that the problem is complicated and difficult. But most of the comments refer to the effect on the feed industry, whereas to your advisor it seems that the one who will suffer most from over-bureaucratic decisions is the producer of livestock products.

"The farmer will go on buying feed as long as he has animals, but if he cannot continue to use disease prevention and growth stimulants already proven, as well as new products that may be developed and found safe, his disease losses will be greater and his feed efficiency less."

Mr. Cherbonnier suggests that farm organizations should be alerted to the fact that this is a farmer's problem even more than a feed industry problem.

▼ ▼

A COLORADO RANCHER and a dentist have combined their talents to extend the useful life of breeder cows by fitting them with false teeth. Rood Menter, who herds 700 beef cattle near Sedgwick, is convinced that capping the eight front teeth of valuable cows will add anywhere from three to eight years to their lives and pay off in extra calves most of those years. With the help of a practicing dentist he has developed stainless steel crowns which crimp over the cows' front teeth in dental cement.

This was reported by the Denver Post, whose reporter witnessed the running of several cows through Mr. Menter's "dental clinic." It took two years of experimenting to find the right material for use in capping—stainless steel—and the method for doing the dental work. "A cow's usefulness depends directly on its teeth," Mr. Menter explained. "If her teeth give her nothing but pain, she can't graze, or even drink cold water. There's nothing left but the slaughter house." Abrasive material in grass and sand picked up with grass in the normal course of events wears down a cow's choppers, but Rancher Menter figures that with the store teeth she can go on grazing until some vital organ breaks down elsewhere.

REPORT AVAILABLE

WASHINGTON—A free copy of the complete USDA report—Integrating Egg Production and Marketing, Marketing Research Report No. 332—may be obtained by writing to the Office of Information, U.S. Department of Agriculture, Washington 25, D. C.

two farms. Chicks were grown on a third farm. Feed was purchased from five firms in 1958. Three were national brands and two were locally produced. The manager believed that similar quality feed could be produced by the organization at a lower cost. Eggs were sold through a broker. Most eggs were cartoned in the top grade carton of a retail chain.

Operator 3 had the most highly integrated of the operations. A large farm, a breeding flock and hatchery had been operated for many years. Net returns had been used for expansion. Breeding operations were discontinued in 1958 to concentrate on market egg production. This firm had facilities for 100,000 hens and was building facilities for another 80,000. One strain for birds was used, and all feed was manufactured by the firm. To operate the feed mill at an economical level, feed was manufactured for a few others, too. Much of the grain used was grown on farms of the operators. Pullets were grown on a separate farm. Market eggs were cartoned for sale to local retailers. The cartoned eggs were priced on the basis of the New York Urner-Barry Fancy Heavy-Weight White egg quotation.

Operator 4 had 250,000 hens. It was the only cage operation among the five. Several strains of layers were used. All hens were fed the same ration, but formulas varied over time with changes in prices of local grains. All feed was manufactured on the premises. All eggs were sold to a large marketing firm. Eggs were graded and cartoned on the farm in a building leased to the marketing firm. Eggs were usually in retail stores by the second morning after they were laid. Prices were based on prices to retailers as reported by USDA.

Operation 5 was run by a large local feed manufacturer. In 1958, this firm owned 175,000 hens on three farms and marketed the eggs from another flock of 60,000 hens. Both were expanding facilities. This firm originally purchased eggs from local producers to whom it sold feed. However, many of the producers used the organization as a surplus outlet and the quality was often low. A good marketing program could not be built on a fluctuating volume of variable quality, so the firm discontinued buying eggs from all but one producer and started its own production program. Three strains of pullets were used. All were fed the same ration. Pullets were replaced annually. Birds were housed in units of several thousand layers of one strain. Most eggs were cartoned and sold to two retail food chains. Eggs were priced on the basis of the New York Urner-Barry Extra Fancy Heavy-Weight White egg quotation. The firm was building a new egg plant and a hatchery for broiler chicks.

It may be noted that feeding operations were highly standardized in four of the five owner-integrated programs. These four made their own feed.

PROBLEMS AND PLANS FOR CHANGES—Few operators of the integrated programs were entirely satisfied with their programs. Many of the contract marketing and quality control program managers indicated that better field supervision was needed. Several midwestern operators believed that the way to solve the outlet problem for their quality-control eggs was to develop a special organization to handle the eggs in eastern markets.

Several managers, particularly among cooperatives, believed that producers need stronger organizations to bargain effectively with large volume buyers.

Methods of determining payments to producers in the contract production programs generally were considered experimental. Among most contract production operators, payments for labor, facilities and materials probably will be lower in the future.

One contract production operator believed that it would be necessary to add feed manufacturing and hatchery operations to compete effectively in the years ahead. He thought that margins between costs and returns would narrow. Another contract production operator was considering shifting to an owner-integrated operation to reduce costs. The major reason for not having made the change was the problem of financing the big investment needed for facilities.

A number of operators placed emphasis on developing means for lowering costs of producing quality eggs. Some were building brooding and laying houses to control temperature and light. Most operators were testing various strains of birds.

Labor costs were a problem for some. Two owner-integrated operations were in areas with good opportunities for employment in non-farm industries. Both had difficulty in retaining a good labor force. One paid farm laborers $1 per hour, and the other paid $1.25.

APPRAISAL OF PROGRAMS—Among the conditions causing the trend toward more integration are: (1) Opportunities to lower costs through more efficient production and marketing. (2) Need for financing many producers to insure efficient operations. (3) Increasing awareness among retailers of need for uniform, high quality eggs. (4) Increasing size of retail operations, giving retailers greater power in enforcing their demands. (5) Inadequacies of candling as a standardization method. (6) Inability of pricing methods to induce production of uniformly high quality eggs and uniform seasonal distribution of volume and size. (7) Ability to sell more feed by developing contractural arrangements.

The advantages of well coordinated programs over traditional egg production and marketing operations, said Dr. Baker, are likely to result in continued development of these programs.

Greater coordination of both production and marketing through integrated operations can lower costs. The important consideration is total cost of production and marketing combined. Factors in lower costs include lower grading costs, larger flock size, centralized decision-making, elimination of many overhead and selling and other costs, generally lower feed costs through own manufacturing or purchasing at lower prices, less total hand labor and lower costs of marketing.

Because of retailer demands for quality, suppliers often must develop quality control programs to compete. Also, integration is important in solving the standardization problem, and it can help in the seasonal production and size problem.

PROBABLE IMPACTS OF EGG PROGRAMS—Egg production costs likely will be lowered by contract production and large owner-integrated operations. Total production may increase faster than population. Because of low price elasticity of demand for eggs, increased production per person could result in relatively great declines in prices. Unless new uses or consumption habits develop, egg prices may decline in the years ahead. Despite lower prices, many operators who can dovetail production and marketing and take advantage of cost lowering possibilities may have fairly good net incomes. On the other hand, many producers and market operators may go out of the egg business.

Producer changes—Integration may accelerate the trend to fewer and larger producers. Well managed, large owner-integrated operations may have cost advantages over both contract production and contract quality-control operations. Further, an annual management return of only 10¢ per bird equals $25,000 on a 250,000 hen operation. The same return per bird on a 5,000 bird flock nets a management return of only $500. The apparent advantages of large owner-integrated farms may result in an increasing number of them. Financing and capital requirements and labor availability my be important factors here.

The use of hired labor by large owner-integrated firms may result in production and quality-control disadvantages compared to contract production and contract quality-control programs in which the individual operator has his own funds invested.

Paying producers on a volume differential basis undoubtedly will encourage continued development of larger flocks. Incentives for following quality practices may shift from price premiums to requirements which must be met to sell table eggs.

The differences between the higher northeastern prices and prices in other areas are likely to decline as more well coordinated programs develop in other areas. The South also may experience lower relative prices as it moves from deficit to surplus production.

Midwestern producers can have feed cost advantages. Costs in relatively small flocks in the Midwest probably will continue to be at least as low as similar operations in any section of the country. If these sideline producers use family labor, good quality control practices and participate in coordinated marketing programs, they will be difficult to displace.

Southern producers with low costs and good quality control may soon become important competitors for major northeastern markets. The West Coast is not likely to return to the large deficit position of a few years ago or to ship large volumes east again as it once did.

The Northeast, the major deficit area, does not presently have the low housing cost of the South or the low feed cost advantage of the Midwest. Northeastern, as well as midwestern, producers have been accustomed to higher incomes than contract producers in the South. The Northeast has been slower to adopt coordinated programs. Whether producers of this area can retain the proportion of total egg production will depend on programs followed and the importance of lower transfer costs and ability of nearby country-point operators to provide better service to retailers.

The greatest development of contract programs will occur in the South and other relatively low income areas. However, contracting isn't likely to become as important in eggs as it is in broilers.

Many eggs likely will continue to come from smaller producers with direct sales outlets, particularly in smaller cities.

Breeding and hatching—The developments in egg production and marketing mean a continuing trend toward larger and fewer breeders, and, in the long run, lower costs for a given quality of chick. Hatching costs will be reduced with less idle time in hatcheries as more coordinated programs develop. Many hatcheries may go out of business because of excess capacity. It is also probable that hatching operations will become an integral part of larger integrated programs.

Egg handling — There will be changes here, too, and egg plants will increase in size. Direct trading between country-point plants and large retailers will increase.

Pricing problems—Nearly all eggs moving through regular retail channels are priced on the basis of some wholesale quotation or price. With a continued decline in the proportion of eggs and a different quality egg moving through wholesale channels, serious consideration will have to be given to different methods of arriving at prices.

Policies of feed companies, hatcheries and egg plants—Contractural arrangements among feed companies, hatcheries and egg buyers likely will make it harder for the three segments to operate independently.

Sound programs will base plans on realistic prospective prices. Average prices in recent years are not a good indicator of future prices. One program which guaranteed a minimum price to producers failed; a major factor was the decline in prices. Programs which encourage production by estimating returns based on too high egg prices may also fail. Programs which do not coordinate marketing with production are less likely to be successful than well coordinated programs.

PELLETING

(Continued from page 6)

leting the complete grain and concentrate mixture for dairy cows (not including roughage). His report will cover all of the various aspects of pelleting these dairy feeds—such as conditioning, cooling, die speeds, ways of increasing production, etc. He also will describe a new automated pelleting set-up.

Cost of pelleting: For the first time, there will be representative industry data on pelleting costs in different sizes and types of operations. This will come from a cost-of-pelleting study being made by Wolf Management Engineering Co., Chicago, under sponsorship of Feed Production School, Inc. Al Bohl of the Wolf firm told the committee that, from their visits to and surveys of more than 75 mills, they will be able to outline practical installations, show costs and point out cost-increasing problems to be avoided.

Conditioning mash: Oak Smith, Wenger Mixer Mfg. Co., Kansas City, reported the results of an extensive study by his firm on factors in conditioning mash. This involves ways of increasing gelatinization of starches and the effects on pellet toughness and feeding value.

Die speeds: Also described by Mr. Smith was a study of the effect of pellet mill die speeds on the ability of pellets to withstand abrasion. Data on amounts of fines, production rate and other factors for various types of feed, as related to die speed, will be reported at the school.

Bulk pellet handling: Ed Williams of Butler Mfg. Co., Kansas City, described a project to be reported at the school by Art Stegner. The Butler study covers pellet damage caused by various types of handling systems and free fall into tanks of different sizes and types. All tests, it was noted, are conducted under controlled conditions.

Extending die life: New findings on ways to extend die life were reported by R. L. Patterson, The Procter & Gamble Co., Cincinnati, as a result of an extensive research project conducted by P&G in connection with its feed fat business. At the school, Mr. Patterson will show how abrasive polishes, metal coatings and new dies will extend die life. Other data on surface finish and what causes corrosion will be reported.

Effect on micro-ingredients: A compilation of survey information and new data on the effects of such things as pressure and temperature in pelleting on various micro-ingredients will be presented at the school in September. This work is being done by Robert C. Wornick of Chas. Pfizer & Co., Inc., Terre Haute, Ind. Problems in recycling fines, antibiotic and vitamin stability data, assay problems and other subjects will be reported. Mr. Wornick was unable to be at the screening session,

and his progress report was given by John Wessman, director of activities for Feed Production School, Inc.

Pellet hardness: There was no representative of Kansas State University at the meeting here, but Eric Carlson of Ralston Purina Co., St. Louis, chairman of the school research committee, reported that the college's feed milling department is running tests on factors affecting pellet hardness. It is hoped that it will be possible to report the findings at the school.

Bag and bulk feed handling: Another research project, on economic factors in bag vs. bulk feed handling, was reported at the meeting by Charles Zusi of Containers Laboratories, Chicago. This project, sponsored by Textile Bag Manufacturers Assn., also will be reported at the school. Mr. Zusi said detailed cost figures obtained from mill and other studies will cover various aspects of distribution costs for bulk, bagged and bag-to-bulk feeds.

Labor efficiency: A study made recently by the U.S. Department of Agriculture, covering labor efficiency in formula feed production, is among other research not dealing with pelleting. Dr. V. John Brensike of USDA will discuss the findings at the school.

"Dress Rehearsal"

The screening session here included "dress rehearsal" presentations of other discussions to be given at the production school, too.

For example, Phil Wake, J. H. Wake Feed Mill, Oskaloosa, Iowa, presented his talk before the committee. This presentation will get down to the specifics in covering the pelleting of complete rations for swine and poultry. Such factors as formulation, grind, steam requirements, use of liquids, die selection and system design are covered.

Will Brooks, Illinois Farm Supply Co., Springfield, told of his firm's system of producing what he called a high-protein, medium molasses pellet (up to 32% molasses) with a hard pellet mill. Complete details on the system and its operation will be outlined at the school.

Also outlined at the recent meeting was material to be presented at the school by a leading ag engineer on an engineering appraisal of the pelleting and wafering of roughages.

Among other subjects to be covered at the school Sept. 23-25 by feed, equipment company and other experts are pelleting of problem ingredients, by C. N. Hultberg of California Pellet Mill Co.; formulation of feeds for pelleting, by a team of three from Kent Feeds, Inc., Muscatine, Iowa; crumbling, by Robert Bartikoski of Nutrena Mills, Inc., Minneapolis; and pelleting of roughage and complete rations for ruminants, by H. C. Prescott, Aero Bulk Mfg. Co., Kansas City.

In addition to these talks, there will be specialized sessions on the third day, with panels of experts answering feed men's questions. Max Cooley, Hoffman-Taff, Inc., Springfield, Mo., reported that these sessions are all set and will cover liquids handling, cooling and drying pellets, premixing, quality control, handling and conveying pellets, and grinding and mixing roughages.

The committee also discussed tentative plans for technical discussion sessions to be held in the evening during the production school, with enrollees who wish to do so taking part in the sessions along with the speakers and men reporting on research.

Short Course

Another feature of the Manhattan Beach meeting was a report by Kenneth Winterscheidt, Winterscheidt Milling Co., Seneca, Kansas, chairman of the Small Mill Short Course. He reported that the program details are complete for this one-day event on Sept. 26. Like the main school, it will deal to a considerable extent with various aspects of pelleting, plus such things as mill design, financing of mill facilities, ways of building formulas, quality and inventory control, preventive maintenance and portable mill operation.

Fred Darragh, Jr. (Darragh Co., Little Rock), chairman; Lloyd Larson, president, and other members of the board of trustees of Feed Production School, Inc., also held a meeting at Manhattan Beach. They not only discussed this year's school but also made some tentative plans for the years ahead.

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MARKETS

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some feeds show an increased volume of sales. Dairy and cattle feeds are both moving better, presumably because of deteriorating pasture conditions. Turkey feeds gain a little every week and still have further to go. The drop in deliveries seems to be heaviest in the poultry and hog feed lines with the major share concentrated in a few hog feed items.

Pacific Northwest

Formula feeding was well maintained at volume levels with some mixers reporting a slightly larger movement of poultry feeds. There was also a larger volume of turkey feed sales reported with egg mashes moving better in face of advancing egg listings.

Hot, dry weather is browning-up western Oregon and Washington pastures.

Portland and Seattle dealers advanced producer paying prices for eggs by 2¢ on large and small offerings of all grades with small eggs holding unchanged tags.

Portland and Seattle ingredient trading was termed moderately steady with buying limited to nearby needs.

Steady values ruled transactions with the exception of higher prices for wheat millfeed and whole barley; lower listings for whole milo and soybean meal.

Ohio Valley

Sales of formula feeds are continuing at the steady pace noted during recent weeks, although manufacturers are keeping sharp eyes on the drouth situation which has not been alleviated by the few widely scattered showers in the Valley area during the last week.

Following the driest June reported since 1930, there has been less than a half-inch of rainfall during this month and, as a result, pasturage has now become so depleted that there no longer is sufficient edible grass for the feeding of either beef cattle or dairy cows. This lack is being met by the feeding of silage, hay and formula feeds, although consumption of the latter has not yet been in sufficient tonnages to materially increase sales to farmers.

Also being affected are such crops as corn and burley tobacco, although the drouth has aided the harvesting of wheat and other grains. A second cutting of alfalfa is currently underway, but in much shorter supply than is customary at this mid-season.

Meanwhile, prices of eggs at area wholesale markets continued to fluctuate considerably this week, with some grades and sizes holding steady, while others moved up as much as 4¢ doz. Prices for various weights of poultry remained generally unchanged, with supplies of chickens in somewhat short supply to meet the improved demand.

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What we do take credit for is trapping the Vitamin A and trace minerals in this top-quality alfalfa via quick dehydration, preserving them under inert gas storage and making them available to feed manufacturers in the convenient form of Merry Mixer dehydrated alfalfa greenules.

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